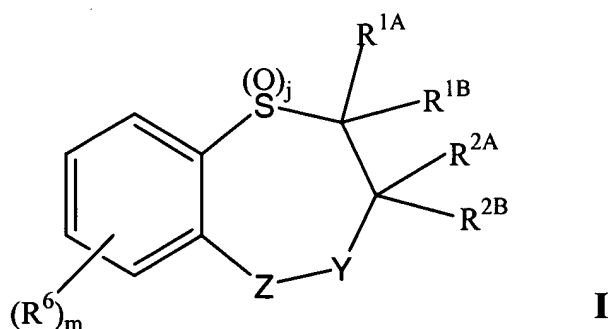


This Listing of Claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1. (Currently Amended) A compound of Formula I:



wherein:

j is 0, 1 or 2; and

m is 0, 1, 2, 3 or 4; and

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl; or

R<sup>2A</sup> and R<sup>2B</sup> together with the carbon atom to which they are attached form a C<sub>3-10</sub> cycloalkyl group; and

one of Z and Y is NR<sup>3</sup> and the other of Z and Y is CHR<sup>4</sup>;

wherein R<sup>3</sup> and R<sup>4</sup> are independently selected from the group consisting of hydrogen, acyl, thioacyl, and R<sup>5</sup>; and

wherein R<sup>5</sup> is selected from the group consisting of alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; -OR<sup>9</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; and -SO<sub>3</sub>R<sup>9</sup>;

wherein the R<sup>5</sup> alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; and quaternary heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl;

alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^5$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl;

heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^5$  radical optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7$ ;  $-N^+R^7R^8A^-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7$ ;  $-P(O)R^7$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$  and  $R^{10}$  are independently selected from  $R^w$  and carboxyalkyl heterocycle;

wherein  $R^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen;  $-CN$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl;

carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-CN$ ; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny;  $-OR^{16}$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{10}R^wA^-$ ;  $-SR^{16}$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^{16}$ ;  $-CO_2R^{16}$ ;  $-CONR^9R^{10}$ ;  $-SO_2NR^9R^{10}$ ;  $-PO(OR^{16})OR^{17}$ ;  $-PR^9R^{10}$ ;  $-P^+R^9R^{10}R^{11}A^-$ ;  $-S^+R^9R^{10}A^-$ ; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

one or more R<sup>6</sup> radicals are independently selected from the group consisting of R<sup>5</sup>, hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -S(O)<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>14</sup>C(O)R<sup>13</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -OR<sup>18</sup>; -S(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>R<sup>18</sup>; -NR<sup>18</sup>OR<sup>14</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the R<sup>6</sup> alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen; -CN; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R

$^{10}$ ;  $-\text{SO}_2\text{NR}^9\text{R}^{10}$ ;  $-\text{PO}(\text{OR}^{16})\text{OR}^{17}$ ;  $-\text{PR}^9\text{R}^{10}$ ;  $-\text{P}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ;  $-\text{S}^+\text{R}^9\text{R}^{10}\text{A}^-$ ; and carbohydrate residue; and

wherein the  $\text{R}^6$  quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-\text{CN}$ ;  $-\text{NO}_2$ ; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; polyether;  $-\text{OR}^{13}$ ;  $-\text{NR}^{13}\text{R}^{14}$ ;  $-\text{SR}^{13}$ ;  $-\text{S}(\text{O})\text{R}^{13}$ ;  $-\text{SO}_2\text{R}^{13}$ ;  $-\text{SO}_3\text{R}^{13}$ ;  $-\text{NR}^{13}\text{OR}^{14}$ ;  $-\text{NR}^{13}\text{NR}^{14}\text{R}^{15}$ ;  $-\text{CO}_2\text{R}^{13}$ ;  ~~$-\text{OM-OM}$~~ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{OM}$ ;  $-\text{COR}^{13}$ ;  $-\text{P}(\text{O})\text{R}^{13}\text{R}^{14}$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ;  $-\text{P}(\text{OR}^{13})\text{OR}^{14}$ ;  $-\text{S}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ;  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ; and carbohydrate residue; and

wherein the  $\text{R}^6$  radicals comprising carbon optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^{13}-$ ;  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^{13}\text{A}^-$ ;  $-\text{PR}^{13}-$ ;  $-\text{P}(\text{O})\text{R}^{13}-$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^9-$ ;  $-\text{N}^+\text{R}^9\text{R}^{10}\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^9\text{A}^-$ ;  $-\text{PR}^9-$ ;  $-\text{P}^+\text{R}^9\text{R}^{10}\text{A}^-$ ; or  $-\text{P}(\text{O})\text{R}^9-$ ; and

wherein  $\text{R}^{18}$  is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclylalkoxycarbonyl; and

wherein the  $\text{R}^{18}$  alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclylalkoxycarbonyl radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-\text{CN}$ ;  $\text{NO}_2$ ;  $-\text{OR}^9$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{N}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ;  $-\text{SR}^9$ ;  $-\text{S}(\text{O})\text{R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^9$ ;  $-\text{CO}_2\text{R}^9$ ;  $-\text{CONR}^9\text{R}^{10}$ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^9\text{R}^{10}$ ;  $-\text{PR}^9\text{R}^{10}$ ;  $-\text{P}(\text{OR}^{13})\text{OR}^{14}$ ;  $-\text{PO}(\text{OR}^{16})\text{OR}^{17}$ ; and  $-\text{C}(\text{O})\text{OM}$ ; or

a pharmaceutically acceptable salt or solvate thereof;  
provided that at least one of  $R^3$ ,  $R^4$  and  $R^6$  is  $R^5$ ; and  
provided that at least one of the following conditions is satisfied:  
(a) the  $R^5$  moiety possesses an overall positive charge;  
(b) the  $R^5$  moiety comprises a quaternary ammonium group or a quaternary amine salt;  
(c) the  $R^5$  moiety comprises a phosphonic acid group or at least two carboxyl groups; or  
(d) the  $R^5$  moiety comprises a polyethylene glycol group having a molecular weight of at least 1000.

2. (Currently Amended) A compound of Claim 1 wherein  $R^5$  is aryl substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $R^5$  aryl optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of

the R<sup>5</sup> aryl optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from R<sup>w</sup> and carboxyalkylheterocycle;

wherein R<sup>w</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein R<sup>13</sup> and R<sup>14</sup> together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein R<sup>14</sup> and R<sup>15</sup> together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary

heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocycl; quaternary heterocycl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocycl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

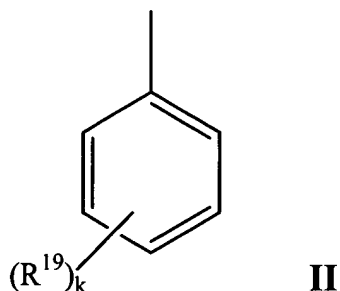
wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocycl; quaternary heterocycl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

3. (Currently Amended) A compound of claim 2 wherein R<sup>5</sup> is:

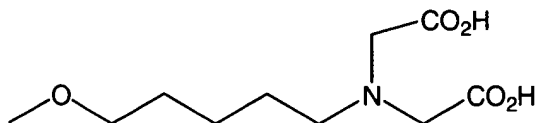
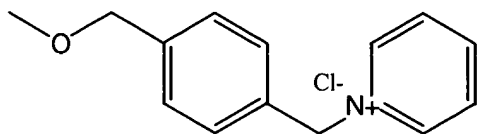


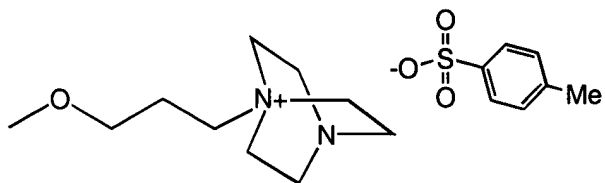
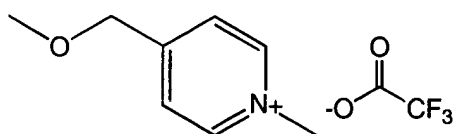
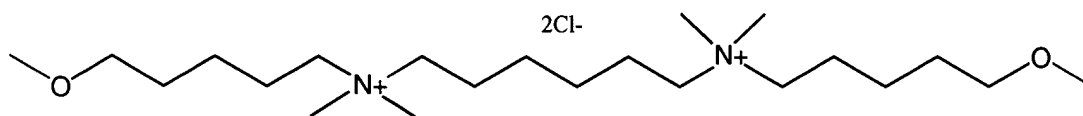
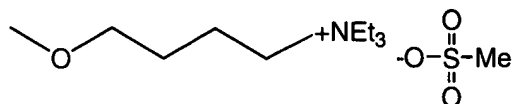
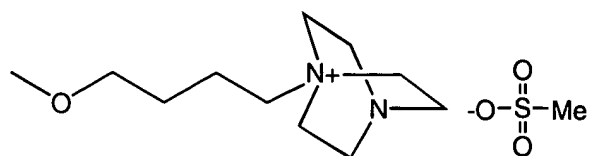
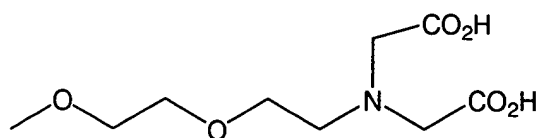


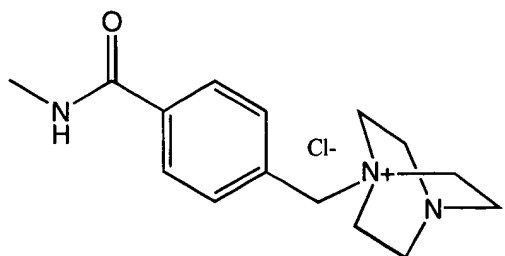
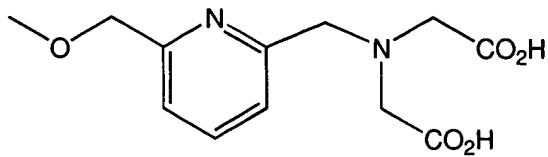
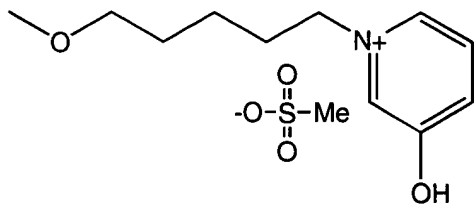
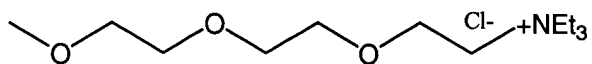
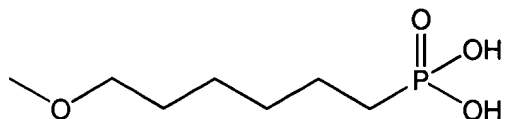
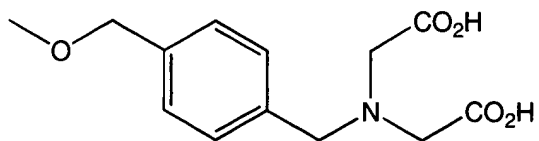
wherein

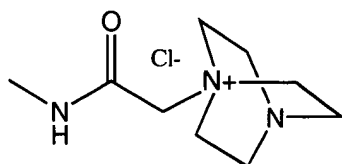
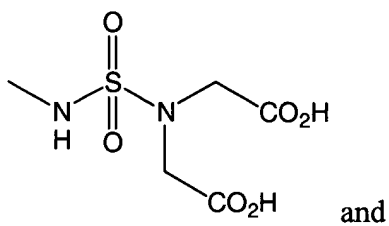
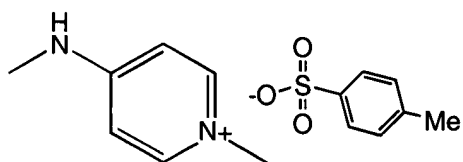
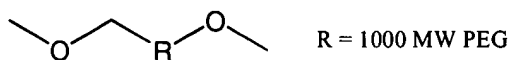
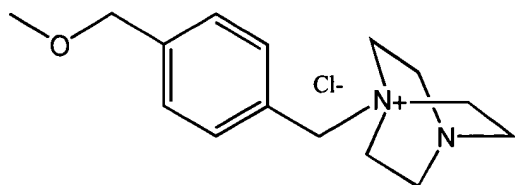
k is 0, 1, 2, 3 or 4; and

one or more  $R^{19}$  are independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and









wherein the R<sup>19</sup> alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>-N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the R<sup>19</sup> alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from R<sup>w</sup> and ~~carboxyalkylheterocycle~~;

wherein R<sup>w</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary

heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{11}R^{12}A^-$ ; and~~

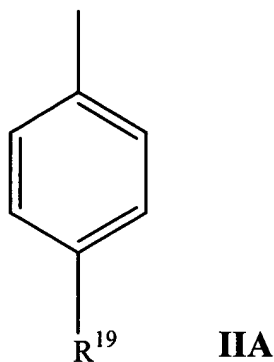
wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -

SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M;  
and

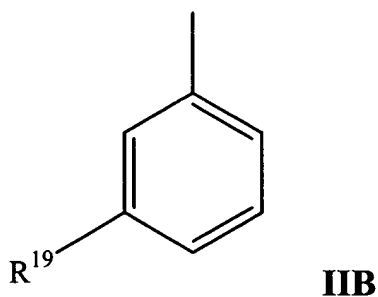
wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

4. (original) A compound of claim 3 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 3.

5. (original) A compound of claim 3 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 3.

6. (original) A compound of claim 3 wherein:

$R^3$  is  $R^5$ ; and

$R^4$  is selected from the group consisting of hydrogen and alkyl.

7. (original) A compound of claim 3 wherein:

$R^3$  is selected from the group consisting of hydrogen and alkyl; and

$R^4$  is  $R^5$ .

8. (Currently Amended) A compound of claim 3 wherein:

$R^3$  is  $R^5$ ; and

$R^4$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and  $-OR^9$ ;

wherein the  $R^4$  alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-CN$ ;  $-NO_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^4$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and



wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the R<sup>4</sup> radical optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup>, R<sup>10</sup>, and R<sup>W</sup> are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein R<sup>13</sup> and R<sup>14</sup> together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein R<sup>14</sup> and R<sup>15</sup> together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidinyl;  $-OR^{16}$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{10}R^wA^-$ ;  $-SR^{16}$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^{16}$ ;  $-CO_2R^{16}$ ;  $-CONR^9R^{10}$ ;  $-SO_2NR^9R^{10}$ ;  $-PO(OR^{16})OR^{17}$ ;  $-PR^9R^{10}$ ;  $-P^+R^9R^{10}R^{11}A^-$ ;  $-S^+R^9R^{10}A^-$ ; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{10}R^{12}A^-$ ; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-;  $-NR^9$ -;  $-N^+R^9R^{10}A^-$ ; -S-; -SO-;  $-SO_2$ -;  $-S^+R^9A^-$ ;  $-PR^9$ -;  $-P^+R^9R^{10}A^-$ ;  $-P(O)R^9$ -; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

9. (Currently Amended) A compound of claim 3 wherein:

$R^3$  is selected from the group consisting of hydrogen;  $\text{alkyl}$ ; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and  $-\text{OR}^9$ ;

wherein the  $R^3$  alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-\text{CN}$ ;  $-\text{NO}_2$ ;  $\text{alkyl}$ ; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-\text{OR}^{13}$ ;  $-\text{NR}^{13}\text{R}^{14}$ ;  $-\text{SR}^{13}$ ;  $-\text{S}(\text{O})\text{R}^{13}$ ;  $-\text{SO}_2\text{R}^{13}$ ;  $-\text{SO}_3\text{R}^{13}$ ;  $-\text{NR}^{13}\text{OR}^{14}$ ;  $-\text{NR}^{13}\text{NR}^{14}\text{R}^{15}$ ;  $-\text{CO}_2\text{R}^{13}$ ;  $-\text{OM}$ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{OM}$ ;  $-\text{COR}^{13}$ ;  $-\text{NR}^{13}\text{C}(\text{O})\text{R}^{14}$ ;  $-\text{NR}^{13}\text{C}(\text{O})\text{NR}^{14}\text{R}^{15}$ ;  $-\text{NR}^{13}\text{CO}_2\text{R}^{14}$ ;  $-\text{OC}(\text{O})\text{R}^{13}$ ;  $-\text{OC}(\text{O})\text{NR}^{13}\text{R}^{14}$ ;  $-\text{NR}^{13}\text{SOR}^{14}$ ;  $-\text{NR}^{13}\text{SO}_2\text{R}^{14}$ ;  $-\text{NR}^{13}\text{SONR}^{14}\text{R}^{15}$ ;  $-\text{NR}^{13}\text{SO}_2\text{NR}^{14}\text{R}^{15}$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P}(\text{O})\text{R}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ;  $-\text{P}(\text{OR}^{13})\text{OR}^{14}$ ;  $-\text{S}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ; and  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-\text{CN}$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-\text{OR}^7$ ;  $-\text{NR}^7\text{R}^8$ ;  $-\text{SR}^7$ ;  $-\text{S}(\text{O})\text{R}^7$ ;  $-\text{SO}_2\text{R}^7$ ;  $-\text{SO}_3\text{R}^7$ ;  $-\text{CO}_2\text{R}^7$ ;  $-\text{CONR}^7\text{R}^8$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{P}(\text{O})\text{R}^7\text{R}^8$ ;  $-\text{PR}^7\text{R}^8$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ; and  $-\text{P}(\text{O})(\text{OR}^7)\text{OR}^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^7-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^7\text{A}^-$ ;  $-\text{PR}^7-$ ;  $-\text{P}(\text{O})\text{R}^7-$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{A}^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl;

guanidinyll; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and  
R<sup>4</sup> is R<sup>5</sup>.

10. (Currently Amended) A compound of claim 3 wherein:

R<sup>19</sup> is independently selected from the group consisting of -OR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -NR<sup>13</sup>C(O)R<sup>14</sup>, -OC(O)NR<sup>13</sup>R<sup>14</sup>, and -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>, and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $\text{N}^+\text{R}^9\text{R}^{10}\text{A}^-$  or  $\text{N}^+\text{R}^9\text{R}^{10}\text{A}^-$ , and

wherein  $\text{R}^{13}$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-\text{SR}^9$ ,  $-\text{S}(\text{O})\text{R}^9$ ,  $-\text{S}(\text{O})_2\text{R}^9$ ,  $-\text{S}(\text{O})_3\text{R}^9$ ,  $-\text{NR}^9\text{R}^{10}$ ,  $-\text{N}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ,  $-\text{CONR}^9\text{R}^{10}$ , and  $-\text{PO}(\text{OR}^{16})\text{OR}^{17}$ , and

wherein  $\text{R}^9$  and  $\text{R}^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclalkyl; and

wherein  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently alkyl; and

wherein  $\text{A}^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

11. (Previously amended) A compound of claim 3 wherein:

$\text{R}^{19}$  is independently selected from the group consisting of  $-\text{OR}^{13}$ ,  $-\text{NR}^{13}\text{R}^{14}$ ,  $-\text{NR}^{13}\text{C}(\text{O})\text{R}^{14}$ ,  $-\text{OC}(\text{O})\text{NR}^{13}\text{R}^{14}$ , and  $-\text{NR}^{13}\text{SO}_2\text{R}^{14}$ , and

wherein  $\text{R}^{13}$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  are independently selected from the group consisting of polyether, aryl, quaternary heterocyclalkyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, and alkylheterocyclalkyl,

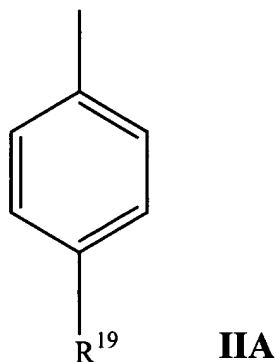
wherein  $\text{R}^{13}$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-\text{SR}^9$ ,  $-\text{S}(\text{O})\text{R}^9$ ,  $-\text{S}(\text{O})_2\text{R}^9$ ,  $-\text{S}(\text{O})_3\text{R}^9$ ,  $-\text{NR}^9\text{R}^{10}$ ,  $-\text{N}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ,  $-\text{CONR}^9\text{R}^{10}$ , and  $-\text{PO}(\text{OR}^{16})\text{OR}^{17}$ , and

wherein  $\text{R}^9$  and  $\text{R}^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclalkyl; and

wherein  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently alkyl; and

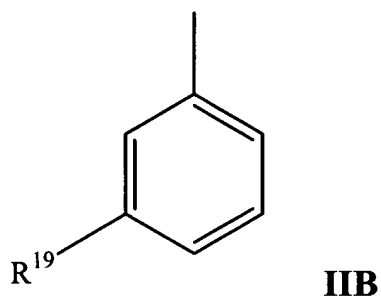
wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

12. (original) A compound of claim 10 wherein  $R^5$  is:



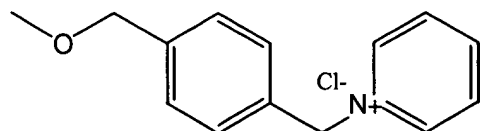
wherein  $R^{19}$  is as defined in Claim 10.

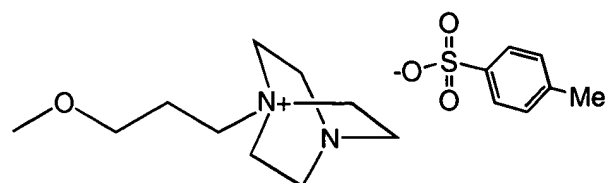
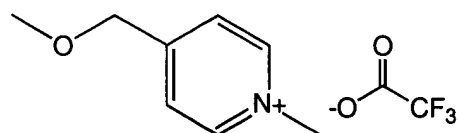
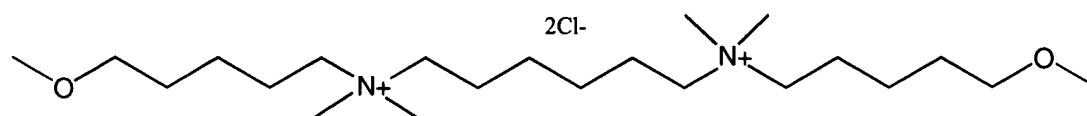
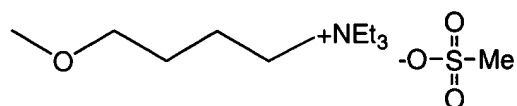
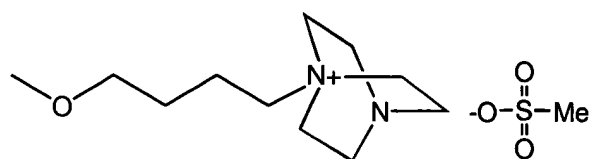
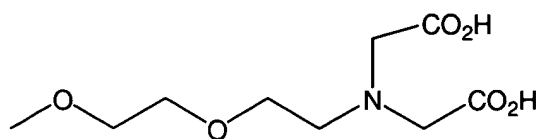
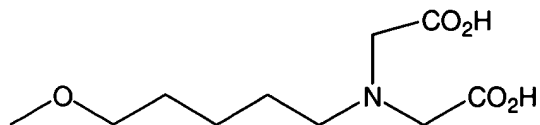
13. (original) A compound of claim 10 wherein  $R^5$  is:



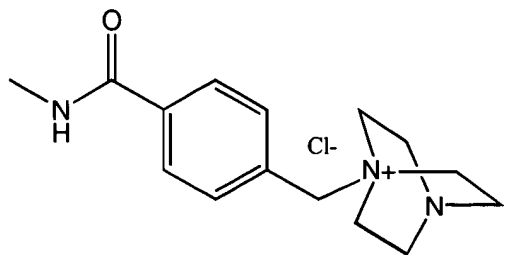
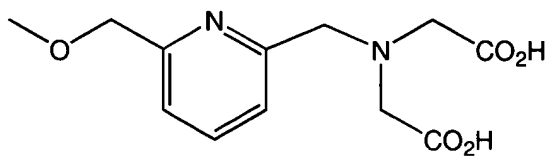
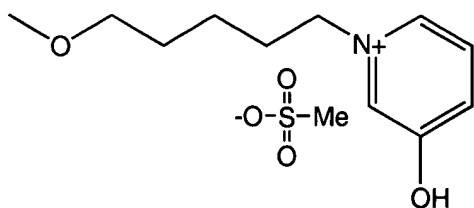
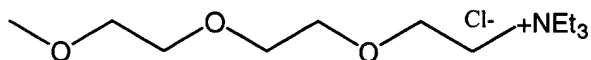
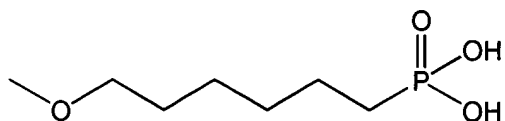
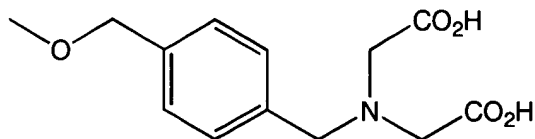
wherein  $R^{19}$  is as defined in Claim 10.

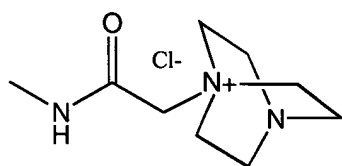
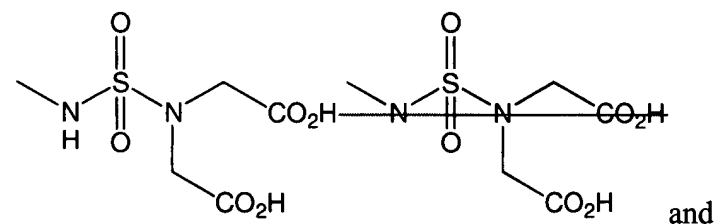
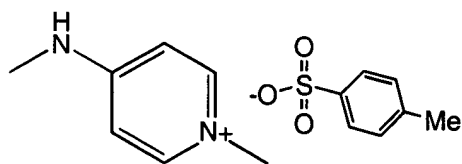
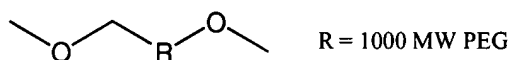
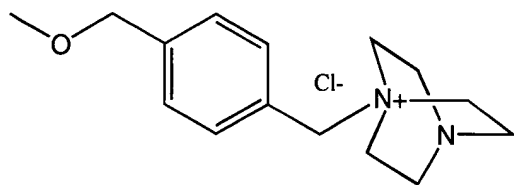
14. (Currently Amended) A compound of claim 3 wherein  $R^{19}$  is selected from the group consisting of:











15. (original) A compound of claim 3 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen and alkyl.

16. (original) A compound of claim 3 wherein:

j is 2;

$R^{1A}$  and  $R^{1B}$  are hydrogen; and  
 $R^{2A}$  and  $R^{2B}$  are independently selected from alkyl.

17. (original) A compound of claim 3 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen; and  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl.
18. (original) A compound of claim 3 wherein j is 1 or 2.
19. (original) A compound of claim 3 wherein j is 2.
20. (original) A compound of claim 3 wherein  $R^{1A}$  and  $R^{1B}$  are hydrogen.
21. (original) A compound of claim 3 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.
22. (original) A compound of claim 3 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting  $C_{1-6}$ alkyl.
23. (original) A compound of claim 3 wherein  $R^{2A}$  and  $R^{2B}$  are the same alkyl.
24. (original) A compound of claim 3 wherein  $R^{2A}$  and  $R^{2B}$  are each n-butyl.
25. (original) A compound of claim 3 wherein one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl.
26. (original) A compound of claim 3 wherein one or more  $R^6$  are independently selected from methoxy and dimethylamino.

27. (original) A compound of claim 3 wherein

j is 1 or 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;

R<sup>2A</sup> and R<sup>2B</sup> are n-butyl; and

one or more R<sup>6</sup> are independently selected from methoxy and dimethylamino.

28. (original) A compound of claim 3 wherein

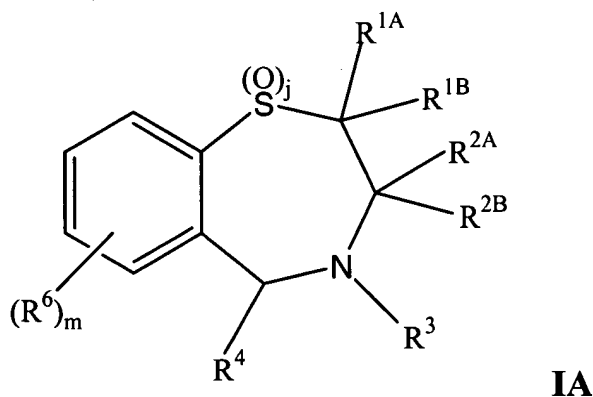
j is 1 or 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;

one of R<sup>2A</sup> and R<sup>2B</sup> is ethyl and the other of R<sup>2A</sup> and R<sup>2B</sup> is n-butyl; and

one or more R<sup>6</sup> are independently selected from methoxy and dimethylamino.

29. (Currently Amended) A compound of claim 1 corresponding to Formula IA:



wherein:

j is 0, 1 or 2; and

m is 0, 1, 2, 3 or 4; and

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl, and aralkyl; or

R<sup>2A</sup> and R<sup>2B</sup> together with the carbon atom to which they are attached form a C<sub>3-7</sub> cycloalkyl group; and

$R^3$  and  $R^4$  are independently selected from the group consisting of hydrogen, acyl, thioacyl, and  $R^5$ ; and

wherein  $R^5$  is selected from the group consisting of alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl;  $-OR^9$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ; and  $-SO_3R^9$ ;

wherein the  $R^5$  alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; and quaternary heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-CN$ ;  $-NO_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $R^5$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $R^5$  radical optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$  and  $R^{10}$  are independently selected from  $R^w$  and ~~carboxyalkylheterocycle~~;

wherein  $R^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl;

heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

one or more R<sup>6</sup> radicals are independently selected from the group consisting of R<sup>5</sup>, hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; acyloxy; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -S(O)<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; ~~OM~~OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>14</sup>C(O)R<sup>13</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -OR<sup>18</sup>; -S(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>R<sup>18</sup>; -NR<sup>18</sup>OR<sup>14</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the  $R^6$  alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen; -CN; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the  $R^6$  quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -PR<sup>13</sup>R<sup>14</sup>; P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the  $R^6$  radicals comprising carbon optionally may have one or more carbons replaced by -O-; -NR<sup>13</sup>-; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>13</sup>A<sup>-</sup>; -PR<sup>13</sup>-; -P(O)R<sup>13</sup>-; -PR<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; or -P(O)R<sup>9</sup>; and

wherein  $R^{18}$  is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl; and

wherein the  $R^{18}$  alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl radicals optionally may be substituted with one or more radicals



selected from the group consisting of halogen; -CN; NO<sub>2</sub>; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; and -C(O)OM; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of R<sup>3</sup>, R<sup>4</sup> and R<sup>6</sup> is R<sup>5</sup>; and

provided that the R<sup>5</sup> alkyl, cycloalkyl, aryl, heterocyclyl, and -OR<sup>9</sup> radicals are not substituted with -O(CH<sub>2</sub>)<sub>1-4</sub>N<sup>+</sup>R'R''R'''A<sup>-</sup> wherein R', R'' and R''' are independently selected from hydrogen and alkyl; and

provided that at least one of the following conditions is satisfied:

(a) the R<sup>5</sup> moiety possesses an overall positive charge; and/or

(b) the R<sup>5</sup> moiety comprises a quaternary ammonium group or a quaternary amine salt;

and/or

(c) the R<sup>5</sup> moiety comprises at least two carboxy groups.

30. (Currently Amended) A compound of Claim 29 wherein R<sup>5</sup> is aryl substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the R<sup>5</sup> aryl optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl;

heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; ~~-N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>~~ -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the R<sup>5</sup> aryl optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from R<sup>w</sup> ~~and carboxyalkyl heterocycle~~;

wherein R<sup>w</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

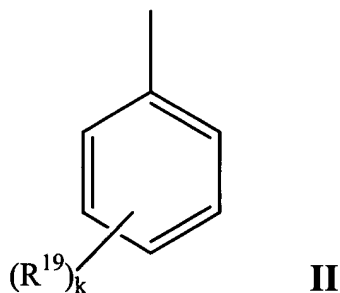
~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{10}R^{12}A^-$ ; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

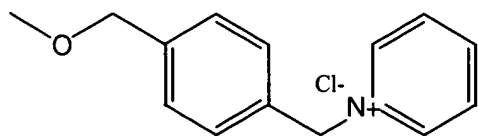
31. (Currently Amended) A compound of claim 30 wherein R<sup>5</sup> is:

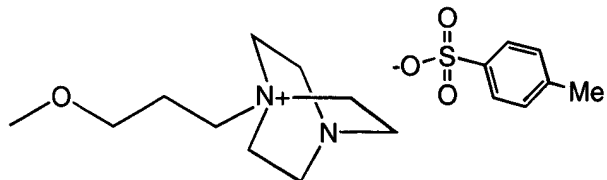
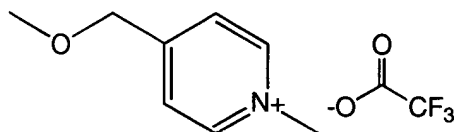
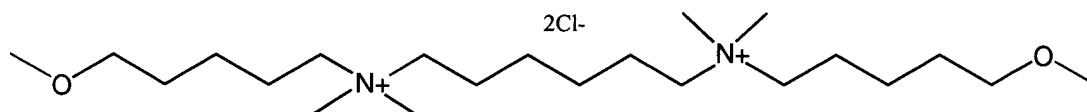
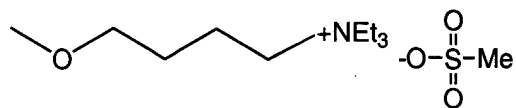
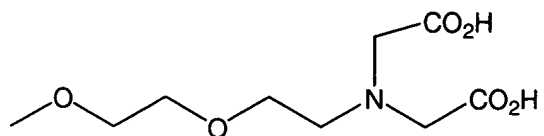
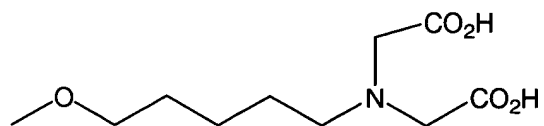


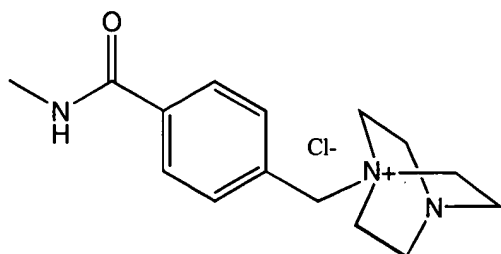
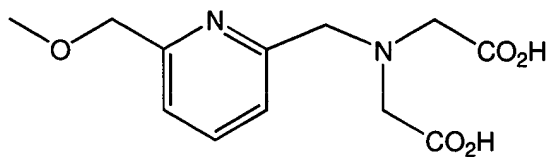
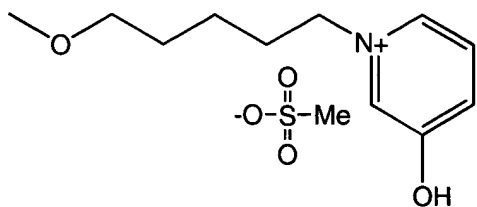
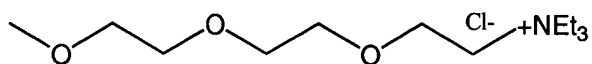
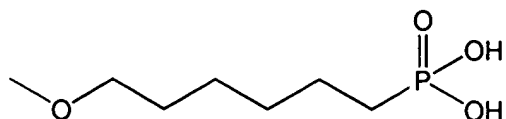
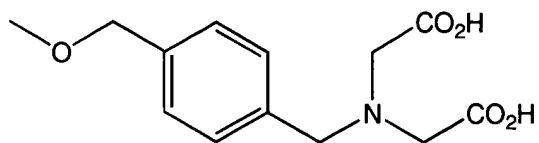
wherein

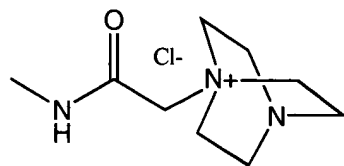
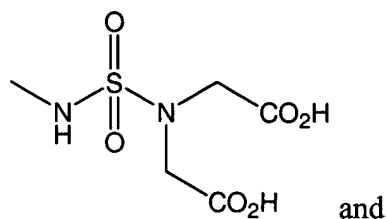
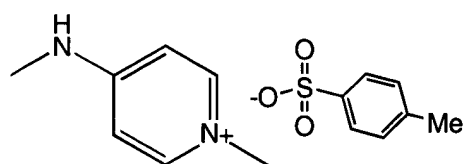
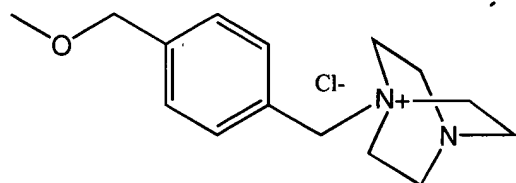
k is 0, 1, 2, 3 or 4; and

one or more R<sup>19</sup> are independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and









;

wherein the R<sup>19</sup> alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -

$\text{SO}_3\text{R}^7$ ;  $-\text{CO}_2\text{R}^7$ ;  $-\text{CONR}^7\text{R}^8$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{P}(\text{O})\text{R}^7\text{R}^8$ ;  $-\text{PR}^7\text{R}^8$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ; and  $-\text{P}(\text{O})(\text{OR}^7)\text{OR}^8$ ; and

wherein the  $\text{R}^{19}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether radicals optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^7-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^7\text{A}^-$ ;  $-\text{PR}^7-$ ;  $-\text{P}(\text{O})\text{R}^7-$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{A}^-$ ; or phenylene; and

wherein  $\text{R}^7$  and  $\text{R}^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $\text{R}^9$  and  $\text{R}^{10}$  are independently selected from  $\text{R}^w$  and carboxyalkylheterocycle;

wherein  $\text{R}^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently selected from the group consisting of hydrogen;  $-\text{CN}$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-\text{OR}^9$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{SR}^9$ ;  $-\text{S}(\text{O})\text{R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^9$ ;  $-\text{CO}_2\text{R}^9$ ; and  $-\text{CONR}^9\text{R}^{10}$ ; or

$\text{R}^{11}$  and  $\text{R}^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $\text{R}^{13}$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or



wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

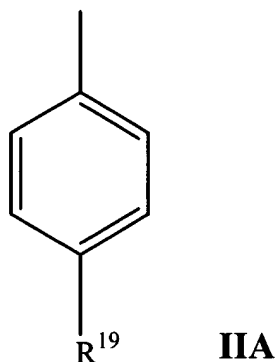
~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of R<sup>9</sup> and M; and

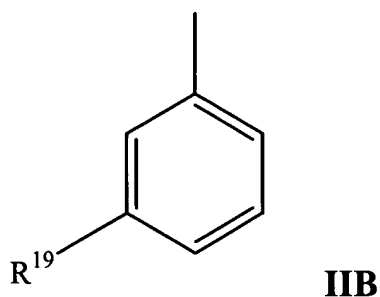
wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

32. (original) A compound of claim 31 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 31.

33. (original) A compound of claim 31 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 31.

34. (original) A compound of claim 31 wherein:  
R<sup>3</sup> is R<sup>5</sup>; and  
R<sup>4</sup> is selected from the group consisting of hydrogen and alkyl.

35. (original) A compound of claim 31 wherein:  
R<sup>3</sup> is selected from the group consisting of hydrogen and alkyl; and

$R^4$  is  $R^5$ .

36. (Currently Amended) A compound of claim 31 wherein:

$R^3$  is  $R^5$ ; and

$R^4$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and  $-OR^9$ ;

wherein the  $R^4$  alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-CN$ ;  $-NO_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^4$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy, alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^4$  radical optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group

consisting of halogen; -CN, alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

37. (Currently Amended) A compound of claim 31 wherein:

R<sup>3</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and -OR<sup>9</sup>;

wherein the R<sup>3</sup> alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO

$2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl;

heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen;  $-CN$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring;  
and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary

heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

R<sup>4</sup> is R<sup>5</sup>.

38. (Currently Amended) A compound of claim 31 wherein:

R<sup>19</sup> is independently selected from the group consisting of -OR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -NR<sup>13</sup>C(O)R<sup>14</sup>, -OC(O)NR<sup>13</sup>R<sup>14</sup>, and -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>, and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of alkyl, polyether, aryl, quaternary heterocyclalkyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl,

wherein alkyl optionally has one or more carbons replaced by O or -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup> or -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>, and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl, -SR<sup>9</sup>, -S(O)R<sup>9</sup>, -S(O)<sub>2</sub>R<sup>9</sup>, -S(O)<sub>3</sub>R<sup>9</sup>, -NR<sup>9</sup>R<sup>10</sup>, -N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>, -CONR<sup>9</sup>R<sup>10</sup>, and -PO(OR<sup>16</sup>)OR<sup>17</sup>, and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclalkyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently alkyl; and



wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

39. (Previously amended) A compound of claim 31 wherein:

$R^{19}$  is independently selected from the group consisting of  $-OR^{13}$ ,  $-NR^{13}R^{14}$ ,  $-NR^{13}C(O)R^{14}$ ,  $-OC(O)NR^{13}R^{14}$ , and  $-NR^{13}SO_2R^{14}$ , and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, and alkylheterocyclalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $N^+R^9R^{10}A^-$  or  $N^+R^9R^{10}A^-$ , and

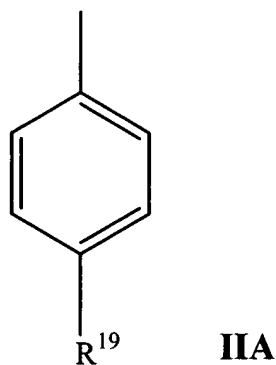
wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-SR^9$ ,  $-S(O)R^9$ ,  $-S(O)_2R^9$ ,  $-S(O)_3R^9$ ,  $-NR^9R^{10}$ ,  $N^+R^9R^{11}R^{12}A^-$ ,  $-CONR^9R^{10}$ , and  $-PO(OR^{16})OR^{17}$ , and

wherein  $R^9$  and  $R^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently alkyl; and

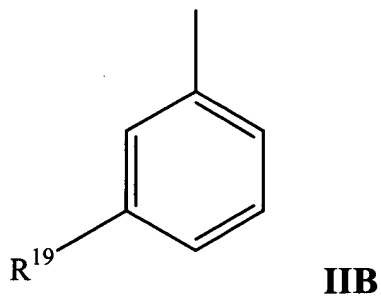
wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

40. (original) A compound of claim 38 wherein  $R^5$  is:



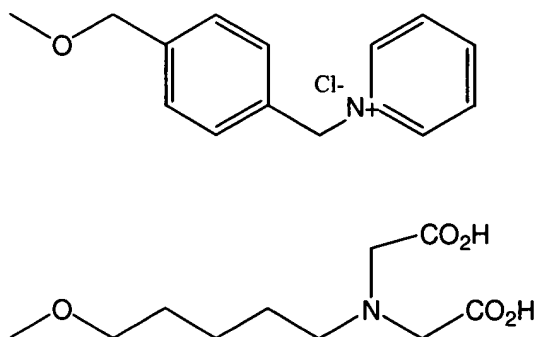
wherein R<sup>19</sup> is as defined in Claim 38.

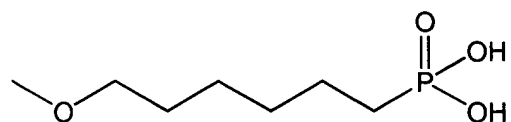
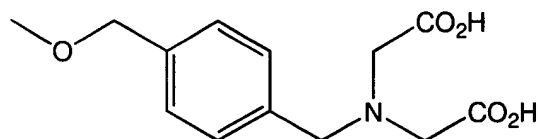
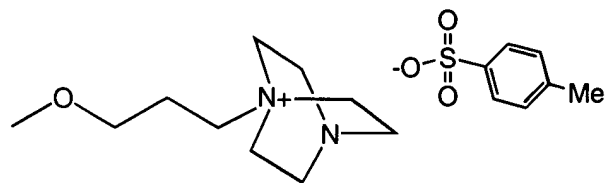
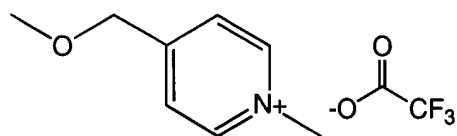
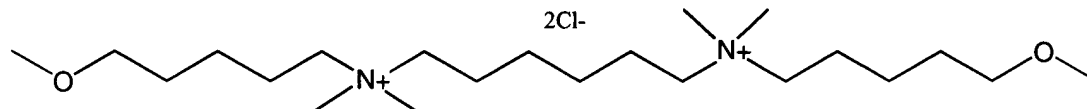
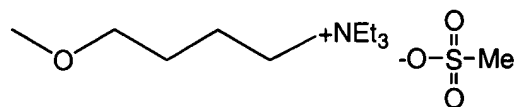
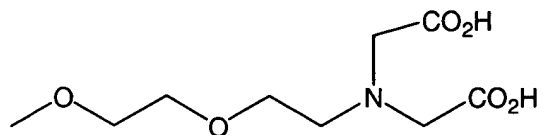
41. (original) A compound of claim 38 wherein R<sup>5</sup> is:

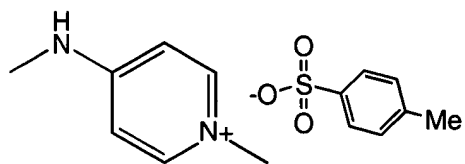


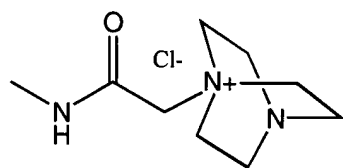
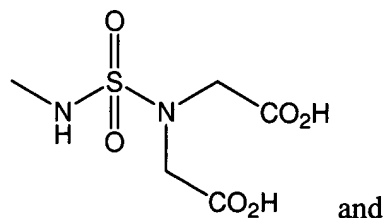
wherein R<sup>19</sup> is as defined in Claim 38.

42. (Currently Amended) A compound of claim 31 wherein R<sup>19</sup> is selected from the group consisting of:









43. (original) A compound of claim 38 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen and alkyl.

44. (original) A compound of claim 38 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from alkyl.

45. (original) A compound of claim 38 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl.

46. (original) A compound of claim 38 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl;

$R^3$  is  $R^5$ ; and

$R^4$  is selected from hydrogen and alkyl.

47. (original) A compound of claim 38 wherein:

j is 2;

$R^{1A}$  and  $R^{1B}$  are hydrogen;

$R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl;

$R^3$  is selected from hydrogen and alkyl; and

$R^4$  is  $R^5$ .

48. (original) A compound of claim 38 wherein j is 1 or 2.

49. (original) A compound of claim 38 wherein j is 2.

50. (original) A compound of claim 38 wherein  $R^{1A}$  and  $R^{1B}$  are hydrogen.

51. (original) A compound of claim 38 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.

52. (original) A compound of claim 38 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting  $C_{1-6}$  alkyl.

53. (original) A compound of claim 38 wherein  $R^{2A}$  and  $R^{2B}$  are the same alkyl.

54. (original) A compound of claim 38 wherein  $R^{2A}$  and  $R^{2B}$  are each n-butyl.

55. (original) A compound of claim 38 wherein one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl.

56. (original) A compound of claim 38 wherein one or more R<sup>6</sup> are independently selected from methoxy and dimethylamino.

57. (original) A compound of claim 38 wherein  
j is 1 or 2;  
R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;  
R<sup>2A</sup> and R<sup>2B</sup> are n-butyl; and  
one or more R<sup>6</sup> are independently selected from methoxy and dimethylamino.

58. (original) A compound of claim 38 wherein  
j is 1 or 2;  
R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;  
one of R<sup>2A</sup> and R<sup>2B</sup> is ethyl and the other of R<sup>2A</sup> and R<sup>2B</sup> is n-butyl; and  
one or more R<sup>6</sup> are independently selected from methoxy and dimethylamino.

59. (original) A compound of claim 42 wherein:  
j is 2;  
R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and  
R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen and alkyl.

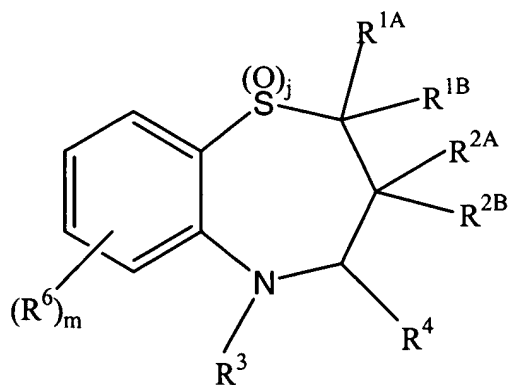
60. (original) A compound of claim 42 wherein:  
j is 2;  
R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and  
R<sup>2A</sup> and R<sup>2B</sup> are independently selected from alkyl.

61. (original) A compound of claim 42 wherein:  
j is 2;  
R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and  
R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl.

62. (original) A compound of claim 42 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl;  
 $R^3$  is  $R^5$ ; and  
 $R^4$  is selected from hydrogen and alkyl.
63. (original) A compound of claim 42 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl;  
 $R^3$  is selected from from hydrogen and alkyl; and  
 $R^4$  is  $R^5$ .
64. (original) A compound of claim 42 wherein j is 1 or 2.
65. (original) A compound of claim 42 wherein j is 2.
66. (original) A compound of claim 42 wherein  $R^{1A}$  and  $R^{1B}$  are hydrogen.
67. (original) A compound of claim 42 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.
68. (original) A compound of claim 42 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting  $C_{1-6}$ alkyl.
69. (original) A compound of claim 42 wherein  $R^{2A}$  and  $R^{2B}$  are the same alkyl.



70. (original) A compound of claim 42 wherein  $R^{2A}$  and  $R^{2B}$  are each n-butyl.
71. (original) A compound of claim 42 wherein one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl.
72. (original) A compound of claim 42 wherein one or more  $R^6$  are independently selected from methoxy and dimethylamino.
73. (original) A compound of claim 42 wherein  
j is 1 or 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are n-butyl; and  
one or more  $R^6$  are independently selected from methoxy and dimethylamino.
74. (original) A compound of claim 42 wherein  
j is 1 or 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl; and  
one or more  $R^6$  are independently selected from methoxy and dimethylamino.
75. (Currently Amended) A compound of claim 1 corresponding to Formula IB:



**IB**

wherein:

j is 0, 1 or 2; and

m is 0, 1, 2, 3 or 4; and

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl, and aralkyl; or

R<sup>2A</sup> and R<sup>2B</sup> together with the carbon atom to which they are attached form a C<sub>3-7</sub> cycloalkyl group; and

R<sup>3</sup> and R<sup>4</sup> are independently selected from the group consisting of hydrogen, acyl, thioacyl and R<sup>5</sup>; and

wherein R<sup>5</sup> is selected from the group consisting of alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; -OR<sup>9</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; and -SO<sub>3</sub>R<sup>9</sup>;

wherein the R<sup>5</sup> alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; and quaternary heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the R<sup>5</sup> radical optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the R<sup>5</sup> radical optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from R<sup>w</sup> and carboxyalkylheterocycle;

wherein R<sup>w</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein R<sup>13</sup> and R<sup>14</sup> together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein R<sup>14</sup> and R<sup>15</sup> together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN, alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{11}R^{12}A^-$ ; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

one or more  $R^6$  radicals are independently selected from the group consisting of  $R^5$ , hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;

acyloxy;  $-\text{OR}^{13}$ ;  $-\text{NR}^{13}\text{R}^{14}$ ;  $-\text{SR}^{13}$ ;  $-\text{S(O)R}^{13}$ ;  $-\text{S(O)}_2\text{R}^{13}$ ;  $-\text{SO}_3\text{R}^{13}$ ;  $-\text{S}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ;  $-\text{NR}^{13}\text{OR}^{14}$ ;  $-\text{NR}^{13}\text{NR}^{14}\text{R}^{15}$ ;  $-\text{CO}_2\text{R}^{13}$ ;  $-\text{OM}$ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;  $-\text{NR}^{14}\text{C(O)R}^{13}$ ;  $-\text{C(O)NR}^{13}\text{R}^{14}$ ;  $-\text{C(O)OM}$ ;  $-\text{COR}^{13}$ ;  $-\text{OR}^{18}$ ;  $-\text{S(O)NR}^{13}\text{R}^{14}$ ;  $-\text{NR}^{13}\text{R}^{18}$ ;  $-\text{NR}^{18}\text{OR}^{14}$ ;  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P(O)R}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the  $\text{R}^6$  alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen;  $-\text{CN}$ ;  $-\text{OR}^{16}$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{N}^+\text{R}^9\text{R}^{10}\text{R}^w\text{A}^-$ ;  $-\text{SR}^{16}$ ;  $-\text{S(O)R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^{16}$ ;  $-\text{CO}_2\text{R}^{16}$ ;  $-\text{CONR}^9\text{R}^{10}$ ;  $-\text{SO}_2\text{NR}^9\text{R}^{10}$ ;  $-\text{PO(OR}^{16})\text{OR}^{17}$ ;  $-\text{PR}^9\text{R}^{10}$ ;  $-\text{P}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ;  $-\text{S}^+\text{R}^9\text{R}^{10}\text{A}^-$ ; and carbohydrate residue; and

wherein the  $\text{R}^6$  quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-\text{CN}$ ;  $-\text{NO}_2$ ; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; polyether;  $-\text{OR}^{13}$ ;  $-\text{NR}^{13}\text{R}^{14}$ ;  $-\text{SR}^{13}$ ;  $-\text{S(O)R}^{13}$ ;  $-\text{SO}_2\text{R}^{13}$ ;  $-\text{SO}_3\text{R}^{13}$ ;  $-\text{NR}^{13}\text{OR}^{14}$ ;  $-\text{NR}^{13}\text{NR}^{14}\text{R}^{15}$ ;  $-\text{CO}_2\text{R}^{13}$ ;  $-\text{OM}$ ;  $-\text{OM}$ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C(O)NR}^{13}\text{R}^{14}$ ;  $-\text{C(O)OM}$ ;  $-\text{COR}^{13}$ ;  $-\text{P(O)R}^{13}\text{R}^{14}$ ;  $\text{PR}^{13}\text{R}^{14}$ ;  $\text{P}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ;  $-\text{P(OR}^{13})\text{OR}^{14}$ ;  $-\text{S}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ;  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ; and carbohydrate residue; and

wherein the  $\text{R}^6$  radicals comprising carbon optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^{13}-$ ;  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^{13}\text{A}^-$ ;  $-\text{PR}^{13}-$ ;  $-\text{P(O)R}^{13}-$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^9-$ ;  $-\text{N}^+\text{R}^9\text{R}^{10}\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^9\text{A}^-$ ;  $-\text{PR}^9-$ ;  $-\text{P}^+\text{R}^9\text{R}^{10}\text{A}^-$ ; or  $-\text{P(O)R}^9-$ ; and

wherein  $R^{18}$  is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl; and

wherein the  $R^{18}$  alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN;  $\text{NO}_2$ ;  $-\text{OR}^9$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{N}^+\text{R}^9\text{R}^{11}\text{R}^{12}\text{A}^-$ ;  $-\text{SR}^9$ ;  $-\text{S}(\text{O})\text{R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^9$ ;  $-\text{CO}_2\text{R}^9$ ;  $-\text{CONR}^9\text{R}^{10}$ ;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^9\text{R}^{10}$ ;  $-\text{PR}^9\text{R}^{10}$ ;  $-\text{P}(\text{OR}^{13})\text{OR}^{14}$ ;  $-\text{PO}(\text{OR}^{16})\text{OR}^{17}$ ; and  $-\text{C}(\text{O})\text{OM}$ ; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of  $R^3$ ,  $R^4$  and  $R^6$  is  $R^5$ ; and

provided that the  $R^5$  alkyl, cycloalkyl, aryl, and heterocyclyl, and  $-\text{OR}^9$  radicals are not substituted with  $-\text{O}(\text{CH}_2)_{1-4}\text{N}^+\text{R}'\text{R}''\text{R}'''\text{A}^-$  wherein  $R'$ ,  $R''$  and  $R'''$  are independently selected from hydrogen and alkyl; and

provided that at least one of the following conditions is satisfied:

- (a) the  $R^5$  moiety possesses an overall positive charge;
- (b) the  $R^5$  moiety comprises a quaternary ammonium group or a quaternary amine salt;

and

- (c) the  $R^5$  moiety comprises at least two carboxy groups.

76. (Currently Amended) A compound of Claim 75 wherein  $R^5$  is aryl substituted with one or more radicals independently selected from the group consisting of halogen; -CN;  $\text{NO}_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-\text{OR}^{13}$ ;  $-\text{NR}^{13}\text{R}^{14}$ ;  $-\text{SR}^{13}$ ;  $-\text{S}(\text{O})\text{R}^{13}$ ;  $-\text{SO}_2\text{R}^{13}$ ;  $-\text{SO}_3\text{R}^{13}$ ;  $-\text{NR}^{13}\text{OR}^{14}$ ;  $-\text{NR}^{13}\text{NR}^{14}\text{R}^{15}$ ;  $-\text{CO}_2\text{R}^{13}$ ; -OM;  $-\text{SO}_2\text{OM}$ ;  $-\text{SO}_2\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{NR}^{13}\text{R}^{14}$ ;  $-\text{C}(\text{O})\text{OM}$ ;  $-\text{COR}^{13}$ ;  $-\text{NR}^{13}\text{C}(\text{O})\text{R}^{14}$ ;  $-\text{NR}^{13}\text{C}(\text{O})\text{NR}^{14}\text{R}^{15}$ ;  $-\text{NR}^{13}\text{CO}_2\text{R}^{14}$ ;  $-\text{OC}(\text{O})\text{R}^{13}$ ;  $-\text{OC}(\text{O})\text{NR}^{13}\text{R}^{14}$ ;  $-\text{NR}^{13}\text{SOR}^{14}$ ;  $-\text{NR}^{13}\text{SO}_2\text{R}^{14}$ ;  $-\text{NR}^{13}\text{SONR}^{14}\text{R}^{15}$ ; -

$\text{NR}^{13}\text{SO}_2\text{NR}^{14}\text{R}^{15}$ ;  $-\text{PR}^{13}\text{R}^{14}$ ;  $-\text{P}(\text{O})\text{R}^{13}\text{R}^{14}$ ;  $-\text{P}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ;  $-\text{P}(\text{OR}^{13})\text{OR}^{14}$ ;  $-\text{S}^+\text{R}^{13}\text{R}^{14}\text{A}^-$ ; and  $-\text{N}^+\text{R}^{13}\text{R}^{14}\text{R}^{15}\text{A}^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $\text{R}^5$  aryl optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl;

heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl;  $-\text{OR}^7$ ;  $-\text{NR}^7\text{R}^8$ ;  $-\text{SR}^7$ ;  $-\text{S}(\text{O})\text{R}^7$ ;  $-\text{SO}_2\text{R}^7$ ;  $-\text{SO}_3\text{R}^7$ ;  $-\text{CO}_2\text{R}^7$ ;  $-\text{CONR}^7\text{R}^8$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{P}(\text{O})\text{R}^7\text{R}^8$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ; and  $-\text{P}(\text{O})(\text{OR}^7)\text{OR}^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $\text{R}^5$  aryl optionally may have one or more carbons replaced by -O-;  $-\text{NR}^7$ -;  $-\text{N}^+\text{R}^7\text{R}^8\text{A}^-$ ; -S-; -SO-;  $-\text{SO}_2$ -;  $-\text{S}^+\text{R}^7\text{A}^-$ ;  $-\text{PR}^7$ -;  $-\text{P}(\text{O})\text{R}^7$ -;  $-\text{P}^+\text{R}^7\text{R}^8\text{A}^-$ ; or phenylene;

wherein  $\text{R}^7$  and  $\text{R}^8$  are independently selected from the group consisting of hydrogen; and alkyl;

wherein  $\text{R}^9$  and  $\text{R}^{10}$  are independently selected from  $\text{R}^w$  and carboxyalkyl heterocycle;

wherein  $\text{R}^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-\text{OR}^9$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{SR}^9$ ;  $-\text{S}(\text{O})\text{R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^9$ ;  $-\text{CO}_2\text{R}^9$ ; and  $-\text{CONR}^9\text{R}^{10}$ ; or

$\text{R}^{11}$  and  $\text{R}^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether

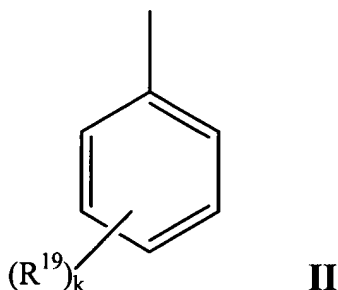


radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

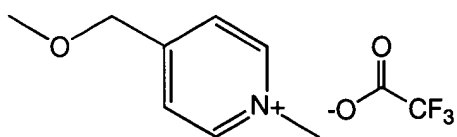
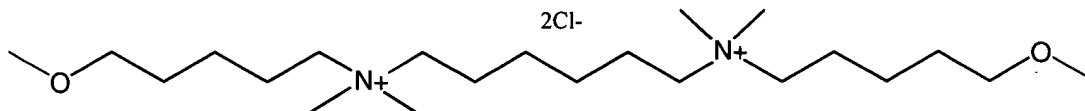
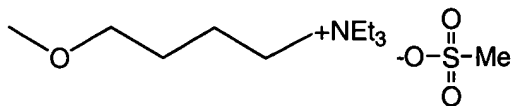
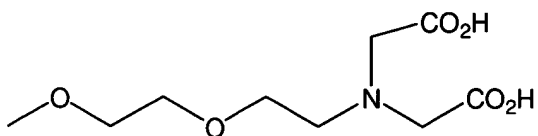
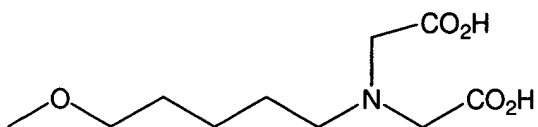
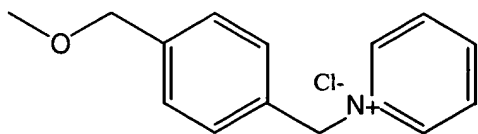
77. (Currently Amended) A compound of claim 76 wherein R<sup>5</sup> is:

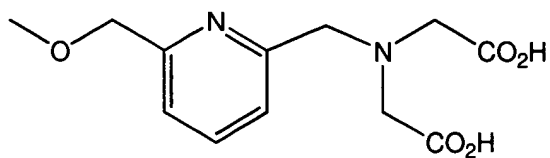
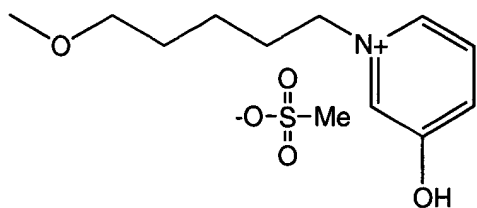
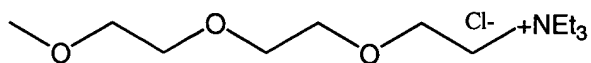
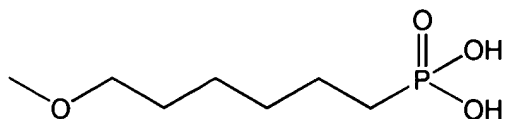
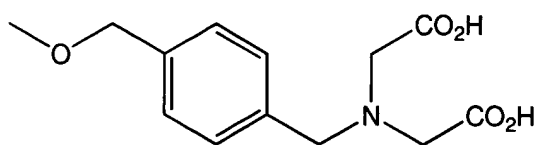
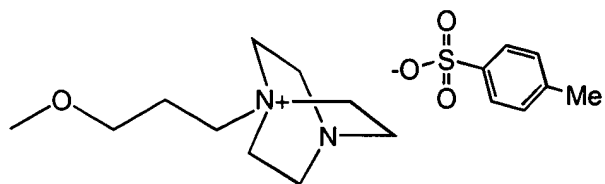


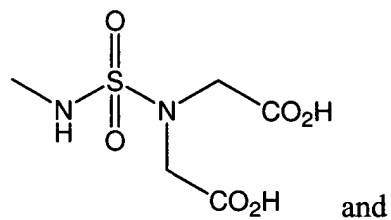
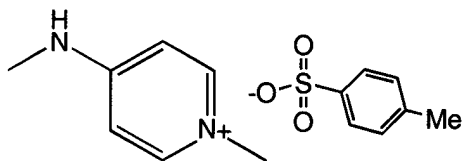
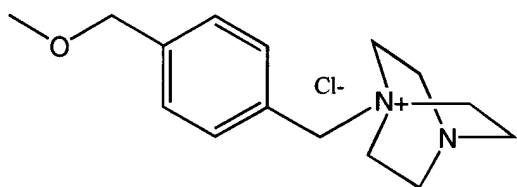
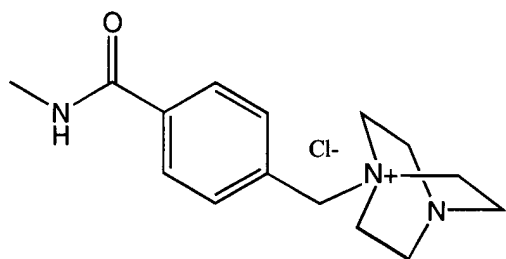
wherein

k is 0, 1, 2, 3 or 4; and

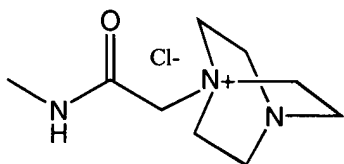
one or more R<sup>19</sup> are independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and







and



;

wherein the  $R^{19}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the  $R^{19}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether radicals optionally may have one or more carbons replaced by -O-;  $-NR^7$ -;  $-N^+R^7R^8A^-$ ; -S-; -SO-;  $-SO_2$ -;  $-S^+R^7A^-$ ;  $-PR^7$ -;  $-P(O)R^7$ -;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$  and  $R^{10}$  are independently selected from  $R^w$  and ~~carboxyalkyl~~ ~~heterocycle~~;

wherein  $R^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary

heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

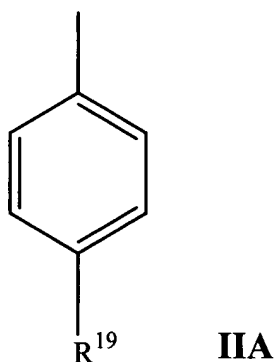
wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -

SO<sup>-</sup>; -SO<sub>2</sub><sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup><sup>-</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup><sup>-</sup>; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

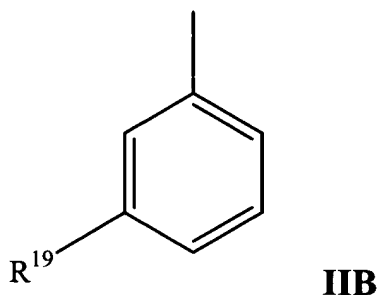
wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

78. (original) A compound of claim 77 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 77.

79. (original) A compound of claim 77 wherein R<sup>5</sup> is:



wherein R<sup>19</sup> is as defined in Claim 77.

80. (original) A compound of claim 77 wherein:

$R^3$  is  $R^5$ ; and

$R^4$  is selected from the group consisting of hydrogen and alkyl.

81. (original) A compound of claim 77 wherein:

$R^3$  is selected from the group consisting of hydrogen and alkyl; and

$R^4$  is  $R^5$ .

82. (Currently Amended) A compound of claim 77 wherein:

$R^3$  is  $R^5$ ; and

$R^4$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and  $-OR^9$ ;

wherein the  $R^4$  alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-CN$ ;  $-NO_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^4$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy, alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and



wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the R<sup>4</sup> radical optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup>, R<sup>10</sup>, and R<sup>W</sup> are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein R<sup>13</sup> and R<sup>14</sup> together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein R<sup>14</sup> and R<sup>15</sup> together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{11}R^{12}A^-$ ; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

83. (Currently Amended) A compound of claim 77 wherein:

$R^3$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, and  $-OR^9$ ;

wherein the  $R^3$  alkyl; cycloalkyl; aryl; heterocyclyl radical is substituted with one or more radicals independently selected from the group consisting of halogen;  $-CN$ ;  $-NO_2$ ; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-SO_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-NR^{13}OR^{14}$ ;  $-NR^{13}NR^{14}R^{15}$ ;  $-CO_2R^{13}$ ;  $-OM$ ;  $-SO_2OM$ ;  $-SO_2NR^{13}R^{14}$ ;  $-C(O)NR^{13}R^{14}$ ;  $-C(O)OM$ ;  $-COR^{13}$ ;  $-NR^{13}C(O)R^{14}$ ;  $-NR^{13}C(O)NR^{14}R^{15}$ ;  $-NR^{13}CO_2R^{14}$ ;  $-OC(O)R^{13}$ ;  $-OC(O)NR^{13}R^{14}$ ;  $-NR^{13}SOR^{14}$ ;  $-NR^{13}SO_2R^{14}$ ;  $-NR^{13}SONR^{14}R^{15}$ ;  $-NR^{13}SO_2NR^{14}R^{15}$ ;  $-PR^{13}R^{14}$ ;  $-P(O)R^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ; and  $-N^+R^{13}R^{14}R^{15}A^-$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may be further substituted with one or more radicals selected from the group consisting of  $-CN$ ; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^3$  radical optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl;

guanidinyll; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and  
R<sup>4</sup> is R<sup>5</sup>.

84. (Currently Amended) A compound of claim 77 wherein:

R<sup>19</sup> is independently selected from the group consisting of -OR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -NR<sup>13</sup>C(O)R<sup>14</sup>, -OC(O)NR<sup>13</sup>R<sup>14</sup>, and -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>, and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $N^+R^9R^{10}A^-$ , and  $N^+R^9R^{10}A^-$ , and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-SR^9$ ,  $-S(O)R^9$ ,  $-S(O)_2R^9$ ,  $-S(O)_3R^9$ ,  $-NR^9R^{10}$ ,  $N^+R^9R^{11}R^{12}A^-$ ,  $-CONR^9R^{10}$ , and  $-PO(OR^{16})OR^{17}$ , and

wherein  $R^9$  and  $R^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclalkyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently alkyl; and

wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

85. (Previously amended) A compound of claim 77 wherein:

$R^{19}$  is independently selected from the group consisting of  $-OR^{13}$ ,  $-NR^{13}R^{14}$ ,  $-NR^{13}C(O)R^{14}$ ,  $-OC(O)NR^{13}R^{14}$ , and  $-NR^{13}SO_2R^{14}$ , and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of polyether, aryl, quaternary heterocyclalkyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, and alkylheterocyclalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $N^+R^9R^{10}A^-$ , and

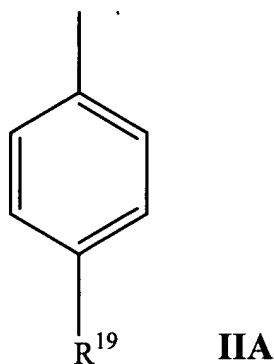
wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-SR^9$ ,  $-S(O)R^9$ ,  $-S(O)_2R^9$ ,  $-S(O)_3R^9$ ,  $-NR^9R^{10}$ ,  $N^+R^9R^{11}R^{12}A^-$ ,  $-CONR^9R^{10}$ , and  $-PO(OR^{16})OR^{17}$ , and

wherein  $R^9$  and  $R^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclalkyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently alkyl; and

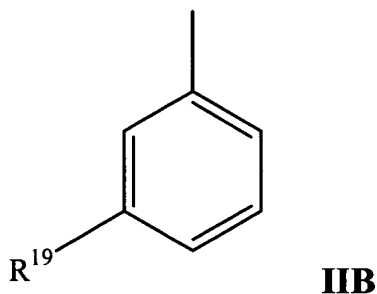
wherein A<sup>-</sup> is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

86. (original) A compound of claim 84 wherein R<sup>5</sup> is:



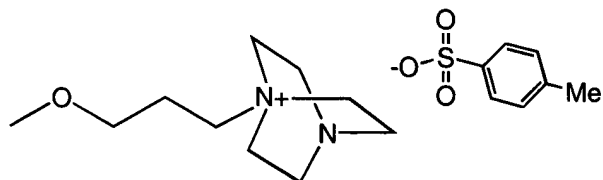
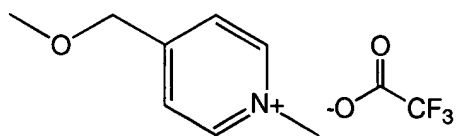
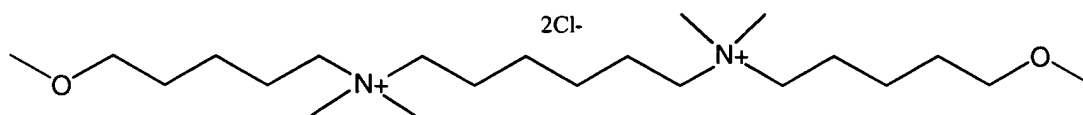
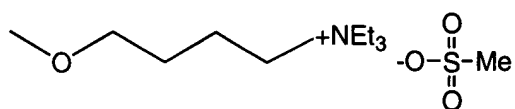
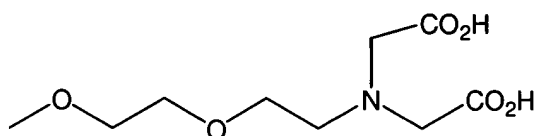
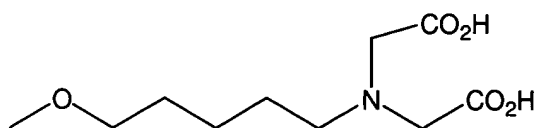
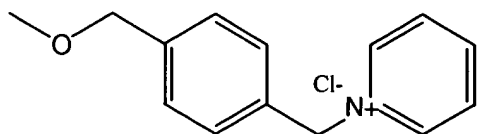
wherein R<sup>19</sup> is as defined in Claim 84.

87. (original) A compound of claim 84 wherein R<sup>5</sup> is:

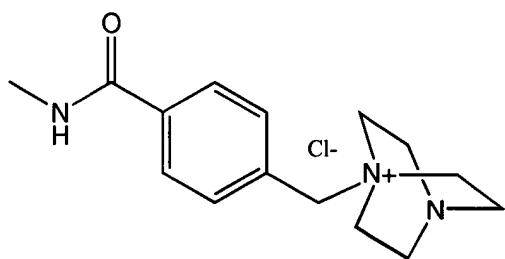
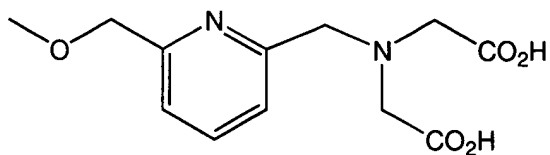
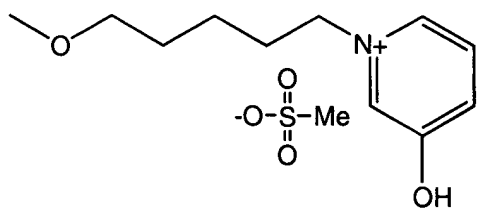
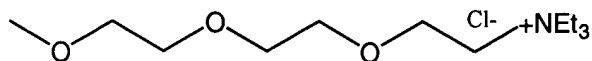
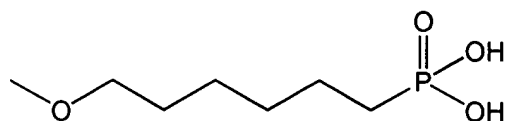
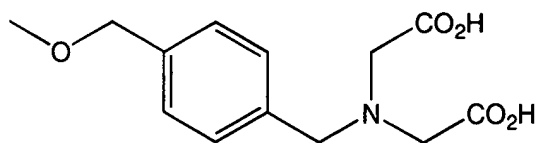


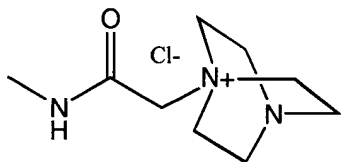
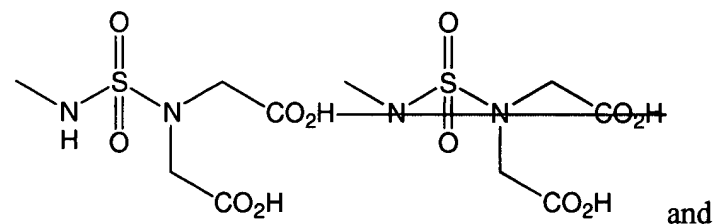
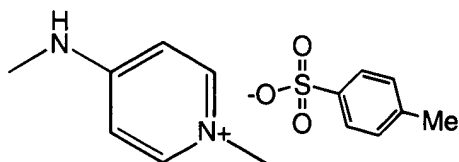
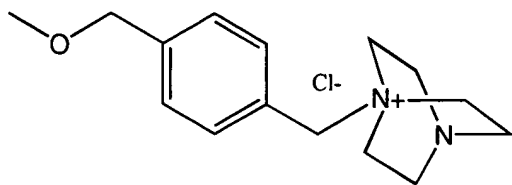
wherein R<sup>19</sup> is as defined in Claim 84.

88. (Currently Amended) A compound of claim 77 wherein R<sup>19</sup> is selected from the group consisting of:









89. (original) A compound of claim 84 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are independently selected from hydrogen and alkyl; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from hydrogen and alkyl.

90. (original) A compound of claim 84 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from alkyl.

91. (original) A compound of claim 84 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen; and  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl.
92. (original) A compound of claim 84 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl;  
 $R^3$  is  $R^5$ ; and  
 $R^4$  is selected from hydrogen and alkyl.
93. (original) A compound of claim 84 wherein:  
j is 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are independently selected from ethyl, propyl and butyl;  
 $R^3$  is selected from from hydrogen and alkyl; and  
 $R^4$  is  $R^5$ .
94. (original) A compound of claim 84 wherein j is 1 or 2.
95. (original) A compound of claim 84 wherein j is 2.
96. (original) A compound of claim 84 wherein  $R^{1A}$  and  $R^{1B}$  are hydrogen.
97. (original) A compound of claim 84 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.

98. (original) A compound of claim 84 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting  $C_{1-6}$ alkyl.

99. (original) A compound of claim 84 wherein  $R^{2A}$  and  $R^{2B}$  are the same alkyl.

100. (original) A compound of claim 84 wherein  $R^{2A}$  and  $R^{2B}$  are each n-butyl.

101. (original) A compound of claim 84 wherein one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl.

102. (original) A compound of claim 84 wherein one or more  $R^6$  are independently selected from methoxy and dimethylamino.

103. (original) A compound of claim 84 wherein

j is 1 or 2;

$R^{1A}$  and  $R^{1B}$  are hydrogen;

$R^{2A}$  and  $R^{2B}$  are n-butyl; and

one or more  $R^6$  are independently selected from methoxy and dimethylamino.

104. (original) A compound of claim 84 wherein

j is 1 or 2;

$R^{1A}$  and  $R^{1B}$  are hydrogen;

one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl; and

one or more  $R^6$  are independently selected from methoxy and dimethylamino.

105. (original) A compound of claim 88 wherein:

j is 2;

$R^{1A}$  and  $R^{1B}$  are independently selected from hydrogen and alkyl; and

$R^{2A}$  and  $R^{2B}$  are independently selected from hydrogen and alkyl.

106. (original) A compound of claim 88 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from alkyl.

107. (original) A compound of claim 88 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen; and

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl.

108. (original) A compound of claim 88 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl;

R<sup>3</sup> is R<sup>5</sup>; and

R<sup>4</sup> is selected from hydrogen and alkyl.

109. (original) A compound of claim 88 wherein:

j is 2;

R<sup>1A</sup> and R<sup>1B</sup> are hydrogen;

R<sup>2A</sup> and R<sup>2B</sup> are independently selected from ethyl, propyl and butyl;

R<sup>3</sup> is selected from from hydrogen and alkyl; and

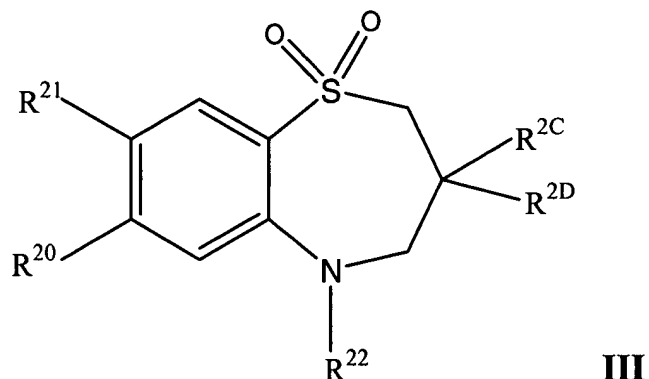
R<sup>4</sup> is R<sup>5</sup>.

110. (original) A compound of claim 88 wherein j is 1 or 2.

111. (original) A compound of claim 88 wherein j is 2.

112. (original) A compound of claim 88 wherein  $R^{1A}$  and  $R^{1B}$  are hydrogen.
113. (original) A compound of claim 88 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.
114. (original) A compound of claim 88 wherein  $R^{2A}$  and  $R^{2B}$  are independently selected from the group consisting  $C_{1-6}$ alkyl.
115. (original) A compound of claim 88 wherein  $R^{2A}$  and  $R^{2B}$  are the same alkyl.
116. (original) A compound of claim 88 wherein  $R^{2A}$  and  $R^{2B}$  are each n-butyl.
117. (original) A compound of claim 88 wherein one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl.
118. (original) A compound of claim 88 wherein one or more  $R^6$  are independently selected from methoxy and dimethylamino.
119. (original) A compound of claim 88 wherein  
j is 1 or 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
 $R^{2A}$  and  $R^{2B}$  are n-butyl; and  
one or more  $R^6$  are independently selected from methoxy and dimethylamino.
120. (original) A compound of claim 88 wherein  
j is 1 or 2;  
 $R^{1A}$  and  $R^{1B}$  are hydrogen;  
one of  $R^{2A}$  and  $R^{2B}$  is ethyl and the other of  $R^{2A}$  and  $R^{2B}$  is n-butyl; and  
one or more  $R^6$  are independently selected from methoxy and dimethylamino.

121. (Currently Amended) A compound of Formula III:



wherein:

$R^{2C}$  and  $R^{2D}$  are independently selected from  $C_{1-6}$  alkyl; and

$R^{20}$  is selected from the group consisting of halogen and  $R^{23}$ ;

$R^{21}$  is selected from the group consisting of hydroxy, alkoxy, and  $R^{23}$ ; and

wherein  $R^{23}$  is aryl substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $R^{23}$  aryl optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -

$S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether substituents of the  $R^{23}$  aryl optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$  and  $R^{10}$  are independently selected from  $R^w$  and carboxyalkylheterocycle;

wherein  $R^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen;  $-CN$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or



wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of R<sup>9</sup> and M; and

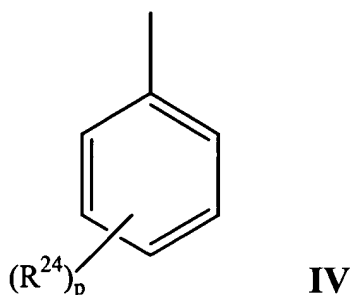
wherein A<sup>-</sup> is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

R<sup>22</sup> is unsubstituted phenyl or R<sup>23</sup>; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of R<sup>20</sup>, R<sup>21</sup> and R<sup>22</sup> is R<sup>23</sup>.

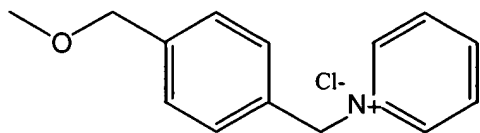
122. (Currently Amended) A compound of Claim 121 wherein R<sup>23</sup> is:

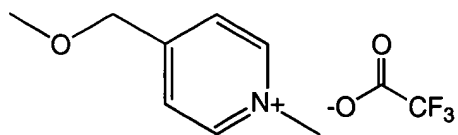
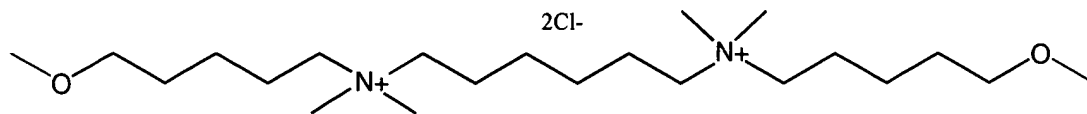
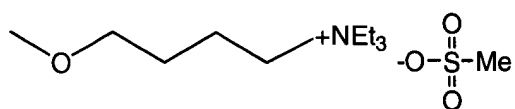
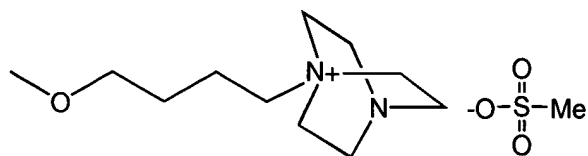
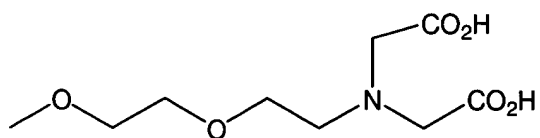
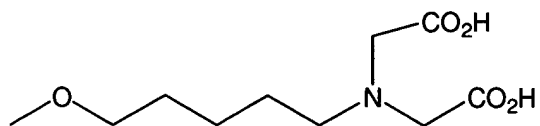


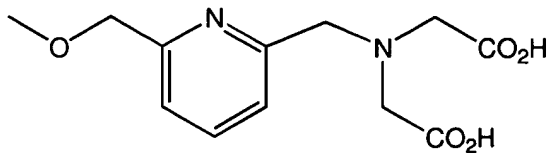
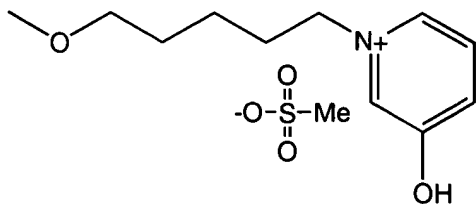
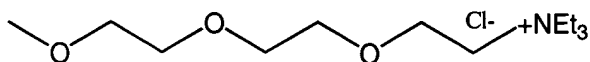
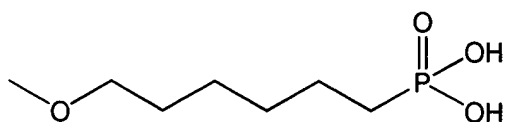
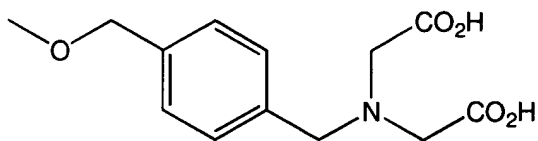
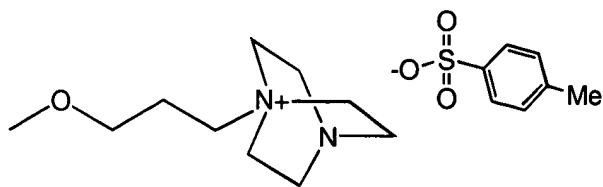
wherein

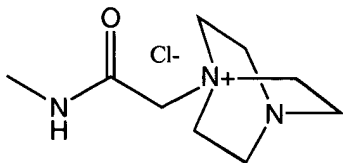
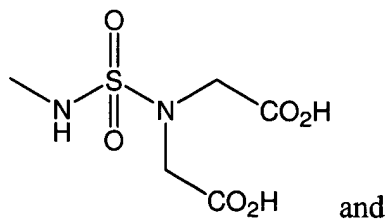
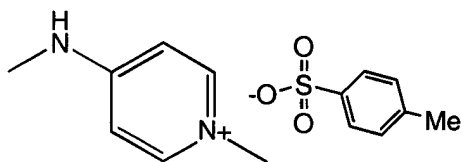
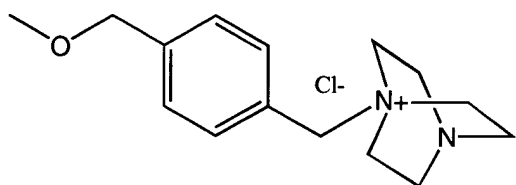
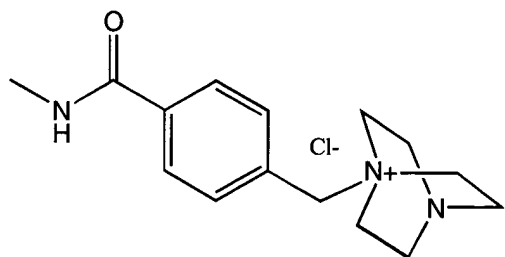
p is 1, 2, 3 or 4; and

one or more R<sup>24</sup> are independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and









wherein the  $R^{24}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl;  $-OR^7$ ;  $-NR^7R^8$ ;  $-SR^7$ ;  $-S(O)R^7$ ;  $-SO_2R^7$ ;  $-SO_3R^7$ ;  $-CO_2R^7$ ;  $-CONR^7R^8$ ;  $-N^+R^7R^8R^9A^-$ ;  $-N^+R^7R^8R^9A^-$ ;  $-P(O)R^7R^8$ ;  $-PR^7R^8$ ;  $-P^+R^7R^8R^9A^-$ ; and  $-P(O)(OR^7)OR^8$ ; and

wherein the  $R^{24}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether radicals optionally may have one or more carbons replaced by -O-;  $-NR^7$ -;  $-N^+R^7R^8A^-$ ; -S-; -SO-;  $-SO_2$ -;  $-S^+R^7A^-$ ;  $-PR^7$ -;  $-P(O)R^7$ -;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$  and  $R^{10}$  are independently selected from  $R^w$  and carboxyalkyl; and

wherein  $R^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary

heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

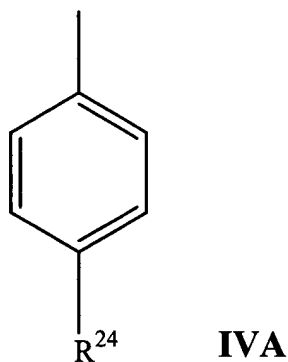
wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -

SO<sup>-</sup>; -SO<sub>2</sub><sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup><sup>-</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup><sup>-</sup>; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M;  
and

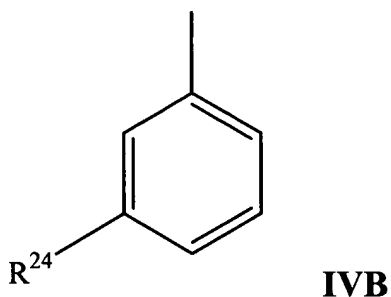
wherein A<sup>-</sup> is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

123. (original) A compound of claim 122 wherein R<sup>23</sup> is:



wherein R<sup>24</sup> is as defined in Claim 122.

124. (original) A compound of claim 122 wherein R<sup>23</sup> is:



wherein R<sup>24</sup> is as defined in Claim 122.

125. (Currently Amended) A compound of claim 122 wherein:



$R^{24}$  is independently selected from the group consisting of  $-OR^{13}$ ,  $-NR^{13}R^{14}$ ,  $-NR^{13}C(O)R^{14}$ ,  $-OC(O)NR^{13}R^{14}$ , and  $-NR^{13}SO_2R^{14}$ , and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $N^+R^9R^{10}A^-$  or  $N^+R^9R^{10}A^-$ , and

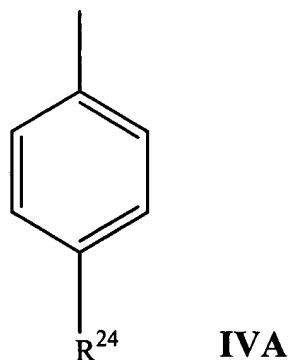
wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-SR^9$ ,  $-S(O)R^9$ ,  $-S(O)_2R^9$ ,  $-S(O)_3R^9$ ,  $-NR^9R^{10}$ ,  $N^+R^9R^{11}R^{12}A^-$ ,  $-CONR^9R^{10}$ , and  $-PO(OR^{16})OR^{17}$ , and

wherein  $R^9$  and  $R^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently alkyl; and

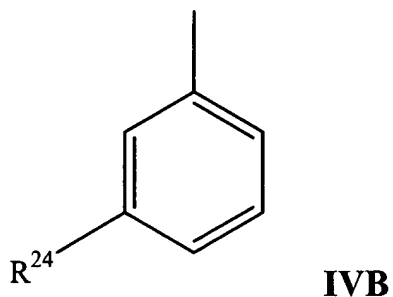
wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

126. (original) A compound of claim 125 wherein  $R^{23}$  is:



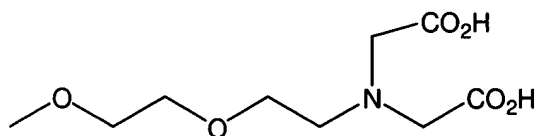
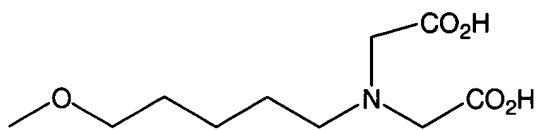
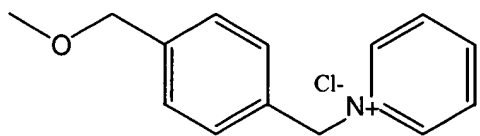
wherein R<sup>24</sup> is as defined in Claim 125.

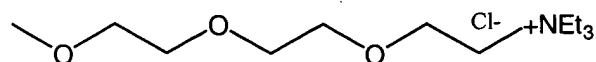
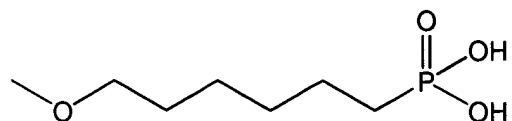
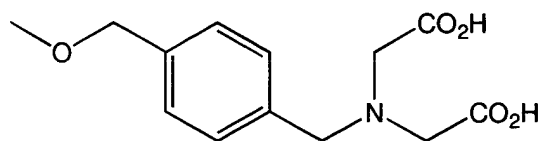
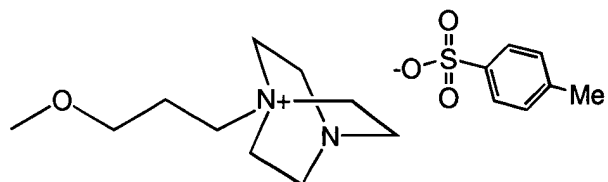
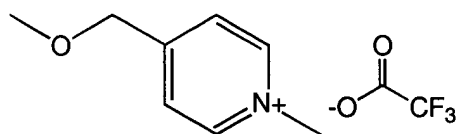
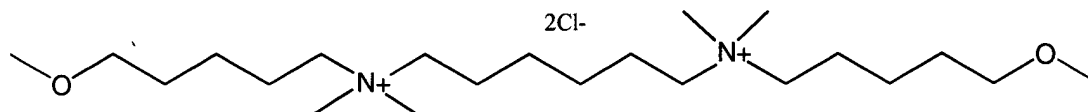
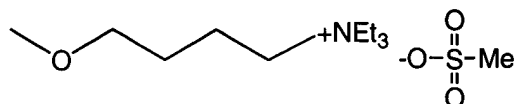
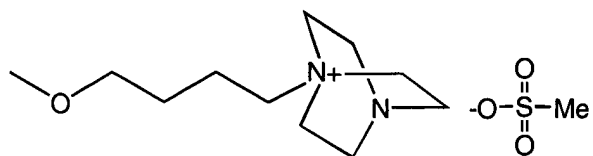
127. (original) A compound of claim 125 wherein R<sup>23</sup> is:

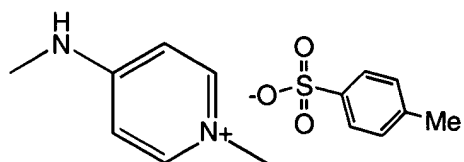
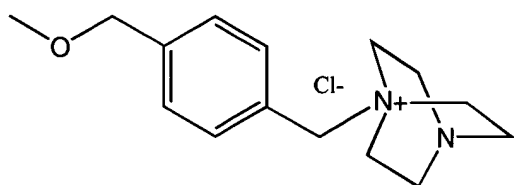
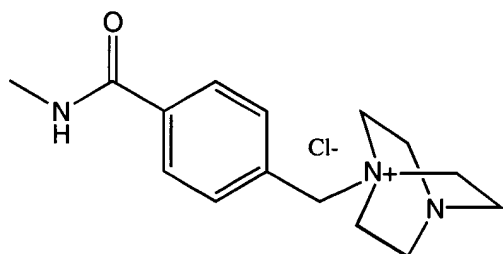
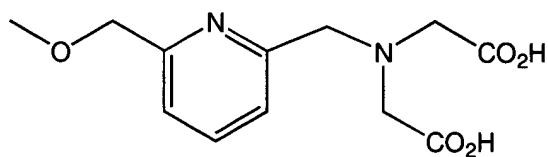
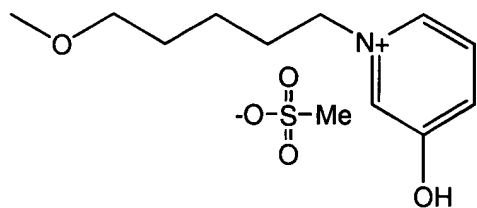


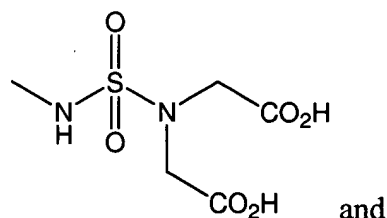
wherein R<sup>24</sup> is as defined in Claim 125.

128. (Currently Amended) A compound of claim 122 wherein R<sup>24</sup> is selected from the group consisting of:

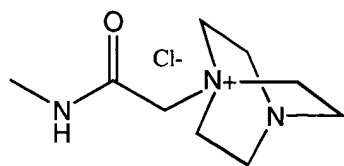








and



129. (original) A compound of claim 122 wherein:  
R<sup>2C</sup> and R<sup>2D</sup> are independently selected from ethyl and n-butyl;  
R<sup>20</sup> is chloro; and  
R<sup>21</sup> is selected from the group consisting of hydroxy and methoxy.

130. (original) A compound of claim 122 wherein:  
R<sup>2C</sup> and R<sup>2D</sup> are n-butyl;  
R<sup>20</sup> is chloro; and  
R<sup>21</sup> is selected from the group consisting of hydroxy and methoxy.

131. (original) A compound of claim 122 wherein:  
one of R<sup>2C</sup> and R<sup>2D</sup> is ethyl and the other of R<sup>2C</sup> and R<sup>2D</sup> is n-butyl;  
R<sup>20</sup> is chloro; and  
R<sup>21</sup> is selected from the group consisting of hydroxy and methoxy.

132. (original) A compound of claim 122 wherein R<sup>2C</sup> and R<sup>2D</sup> are the same alkyl.

133. (original) A compound of claim 122 wherein R<sup>2C</sup> and R<sup>2D</sup> are each n-butyl.

134. (original) A compound of claim 122 wherein one of  $R^{2C}$  and  $R^{2D}$  is ethyl and the other of  $R^{2C}$  and  $R^{2D}$  is n-butyl.

135. (original) A compound of claim 125 wherein:  
 $R^{2C}$  and  $R^{2D}$  are independently selected from ethyl and n-butyl;  
 $R^{20}$  is chloro; and  
 $R^{21}$  is selected from the group consisting of hydroxy and methoxy.

136. (original) A compound of claim 125 wherein:  
 $R^{2C}$  and  $R^{2D}$  are n-butyl;  
 $R^{20}$  is chloro; and  
 $R^{21}$  is selected from the group consisting of hydroxy and methoxy.

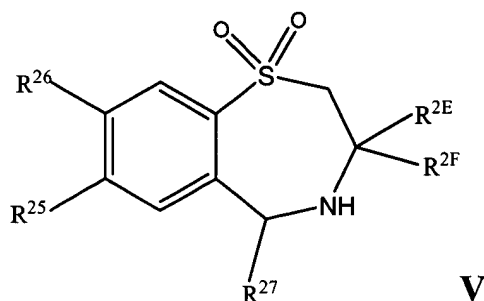
137. (original) A compound of claim 125 wherein:  
one of  $R^{2C}$  and  $R^{2D}$  is ethyl and the other of  $R^{2C}$  and  $R^{2D}$  is n-butyl;  
 $R^{20}$  is chloro; and  
 $R^{21}$  is selected from the group consisting of hydroxy and methoxy.

138. (original) A compound of claim 125 wherein  $R^{2C}$  and  $R^{2D}$  are the same alkyl.

139. (original) A compound of claim 125 wherein  $R^{2C}$  and  $R^{2D}$  are each n-butyl.

140. (original) A compound of claim 125 wherein one of  $R^{2C}$  and  $R^{2D}$  is ethyl and the other of  $R^{2C}$  and  $R^{2D}$  is n-butyl.

141. (Currently Amended) A compound of Formula V:



wherein:

$R^{2E}$  and  $R^{2F}$  are independently selected from  $C_{1-6}$  alkyl; and

$R^{25}$  and  $R^{26}$  are independently selected from the group consisting of hydrogen, alkoxy, and  $R^{28}$ ;

wherein  $R^{28}$  is aryl substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^{28}$  aryl optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of

the R<sup>28</sup> aryl optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup> and R<sup>10</sup> are independently selected from R<sup>w</sup> and carboxyalkylheterocycle;

wherein R<sup>w</sup> is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein R<sup>11</sup> and R<sup>12</sup> are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; and -CONR<sup>9</sup>R<sup>10</sup>; or

R<sup>11</sup> and R<sup>12</sup> together with the carbon atom to which they are attached form a cyclic ring; and

wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein R<sup>13</sup> and R<sup>14</sup> together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein R<sup>14</sup> and R<sup>15</sup> together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary



heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocycl; quaternary heterocycl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>W</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocycl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocycl; quaternary heterocycl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

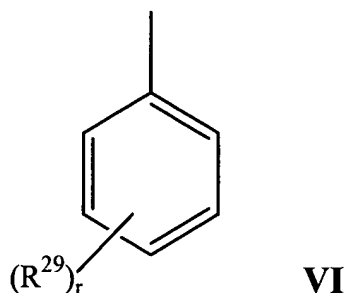
wherein A<sup>-</sup> is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

R<sup>27</sup> is unsubstituted phenyl or R<sup>28</sup>; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of R<sup>25</sup>, R<sup>26</sup> and R<sup>27</sup> is R<sup>28</sup>.

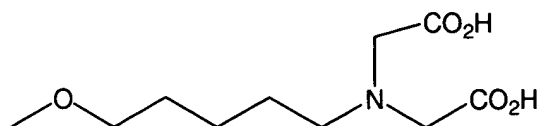
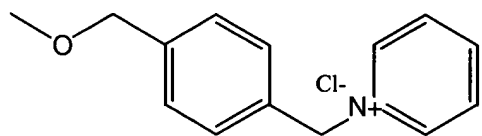
142. (Currently Amended) A compound of Claim 141 wherein R<sup>28</sup> is:

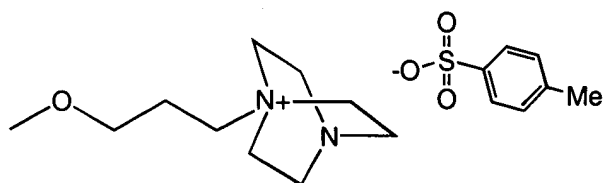
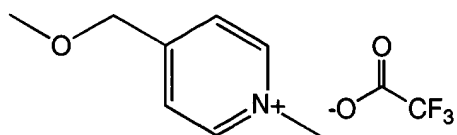
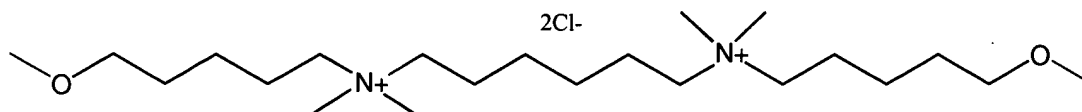
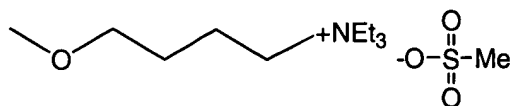
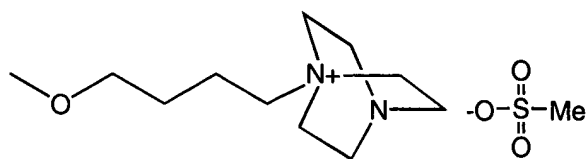
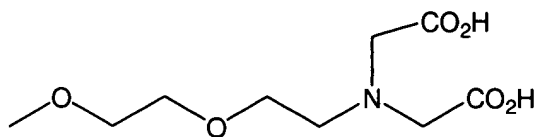


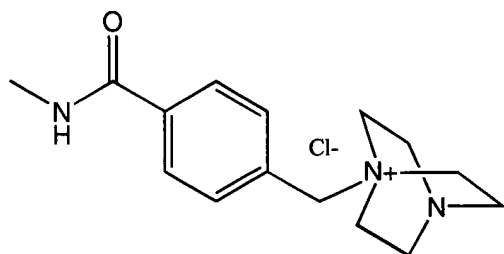
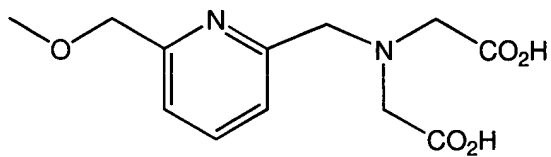
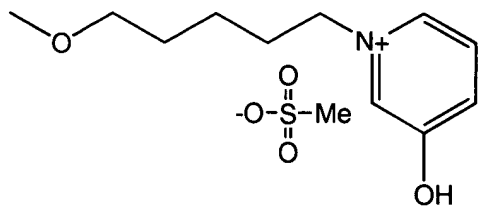
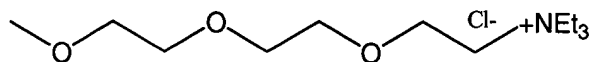
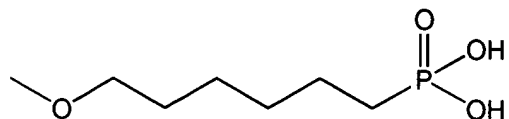
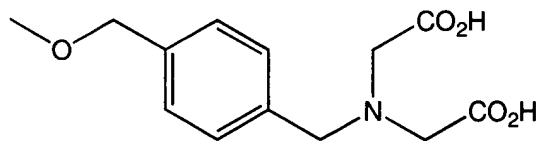
wherein

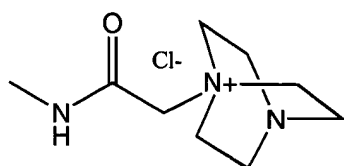
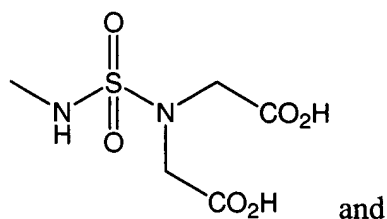
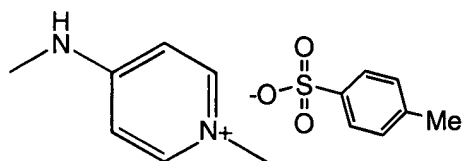
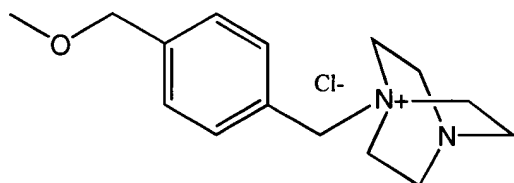
*r* is 1, 2, 3 or 4; and

one or more  $R^{29}$  are independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and









;

wherein the R<sup>29</sup>alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -

$\text{SO}_3\text{R}^7$ ;  $-\text{CO}_2\text{R}^7$ ;  $-\text{CONR}^7\text{R}^8$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ;  $-\text{P}(\text{O})\text{R}^7\text{R}^8$ ;  $-\text{PR}^7\text{R}^8$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{R}^9\text{A}^-$ ; and  $-\text{P}(\text{O})(\text{OR}^7)\text{OR}^8$ ; and

wherein the  $\text{R}^{29}$  alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, and polyether radicals optionally may have one or more carbons replaced by  $-\text{O}-$ ;  $-\text{NR}^7-$ ;  $-\text{N}^+\text{R}^7\text{R}^8\text{A}^-$ ;  $-\text{S}-$ ;  $-\text{SO}-$ ;  $-\text{SO}_2-$ ;  $-\text{S}^+\text{R}^7\text{A}^-$ ;  $-\text{PR}^7-$ ;  $-\text{P}(\text{O})\text{R}^7-$ ;  $-\text{P}^+\text{R}^7\text{R}^8\text{A}^-$ ; or phenylene; and

wherein  $\text{R}^7$  and  $\text{R}^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $\text{R}^9$  and  $\text{R}^{10}$  are independently selected from  $\text{R}^w$  and ~~carboxyalkylheterocycle~~;

wherein  $\text{R}^w$  is selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $\text{R}^{11}$  and  $\text{R}^{12}$  are independently selected from the group consisting of hydrogen;  $-\text{CN}$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclylalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-\text{OR}^9$ ;  $-\text{NR}^9\text{R}^{10}$ ;  $-\text{SR}^9$ ;  $-\text{S}(\text{O})\text{R}^9$ ;  $-\text{SO}_2\text{R}^9$ ;  $-\text{SO}_3\text{R}^9$ ;  $-\text{CO}_2\text{R}^9$ ; and  $-\text{CONR}^9\text{R}^{10}$ ; or

$\text{R}^{11}$  and  $\text{R}^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $\text{R}^{13}$ ,  $\text{R}^{14}$ , and  $\text{R}^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

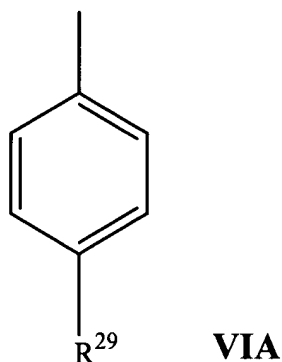
~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of R<sup>9</sup> and M; and

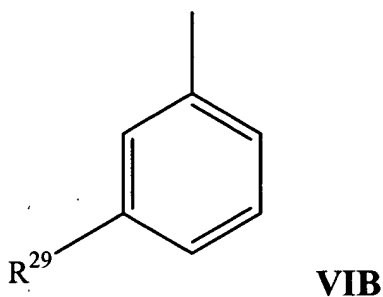
wherein A<sup>-</sup> is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

143. (original) A compound of claim 142 wherein R<sup>28</sup> is:



wherein R<sup>29</sup> is as defined in Claim 142.

144. (original) A compound of claim 142 wherein R<sup>28</sup> is:



wherein R<sup>29</sup> is as defined in Claim 142.

145. (Currently Amended) A compound of claim 142 wherein:

R<sup>29</sup> is independently selected from the group consisting of -OR<sup>13</sup>, -NR<sup>13</sup>R<sup>14</sup>, -NR<sup>13</sup>C(O)R<sup>14</sup>, -OC(O)NR<sup>13</sup>R<sup>14</sup>, and -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>, and



wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl,

wherein alkyl optionally has one or more carbons replaced by O or  $N^+R^9R^{10}A^-$  or  $N^+R^9R^{10}A^-$ , and

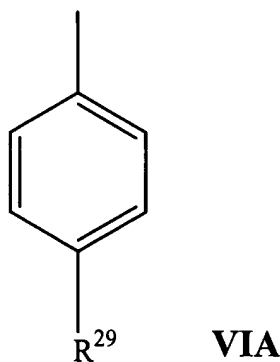
wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are optionally substituted with one or more groups selected from the group consisting of hydroxy, carboxy, alkyl, quaternary heterocyclalkyl,  $-SR^9$ ,  $-S(O)R^9$ ,  $-S(O)_2R^9$ ,  $-S(O)_3R^9$ ,  $-NR^9R^{10}$ ,  $N^+R^9R^{11}R^{12}A^-$ ,  $-CONR^9R^{10}$ , and  $-PO(OR^{16})OR^{17}$ , and

wherein  $R^9$  and  $R^{10}$  are independently selected from the group consisting of hydrogen, alkyl, heterocyclalkyl, carboxyalkyl, carboalkoxyalkyl, and carboxyalkylheterocyclyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently alkyl; and

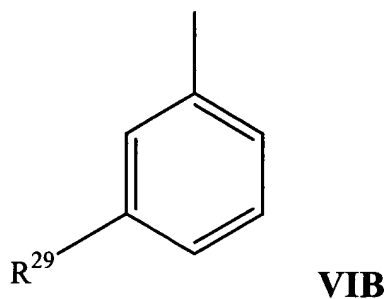
wherein  $A^-$  is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation.

146. (original) A compound of claim 145 wherein  $R^{28}$  is:



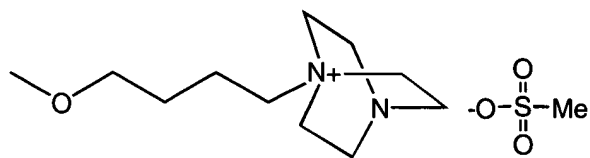
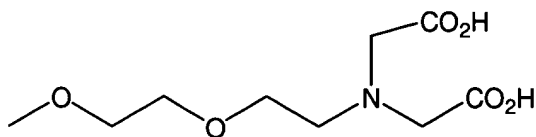
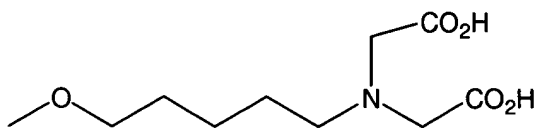
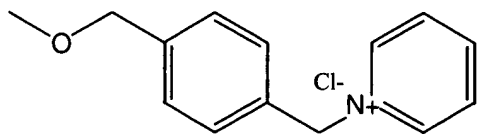
wherein  $R^{29}$  is as defined in Claim 145.

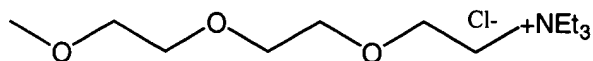
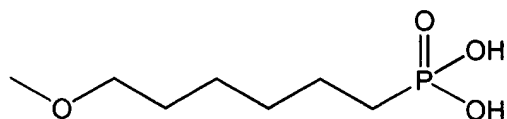
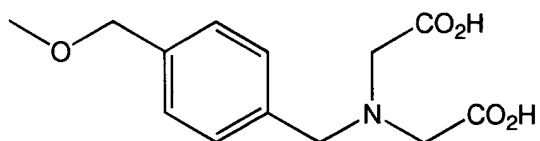
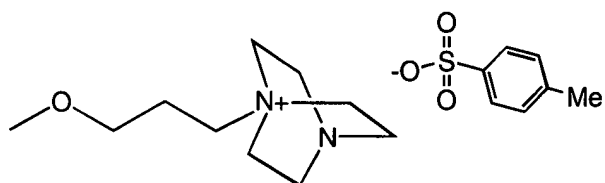
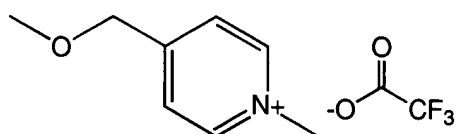
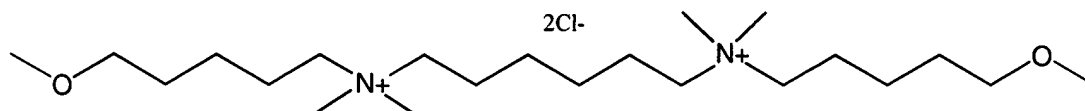
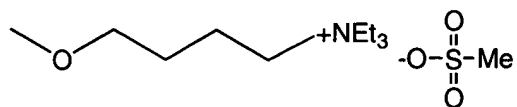
147. (original) A compound of claim 145 wherein  $R^{28}$  is:

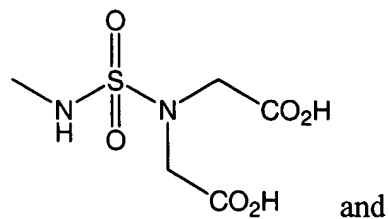
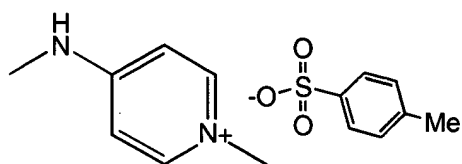
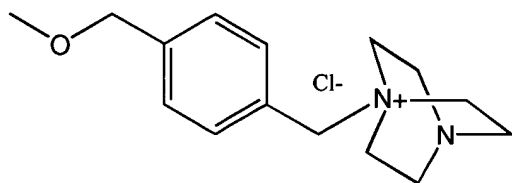
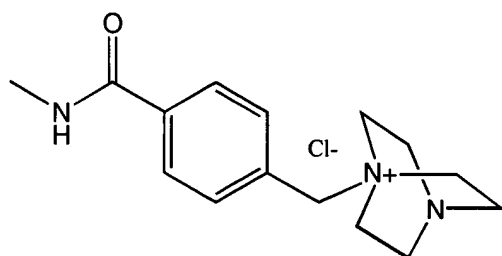
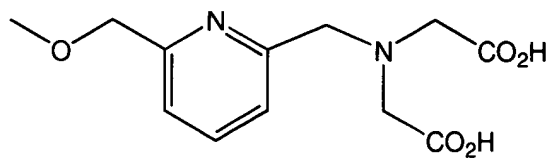
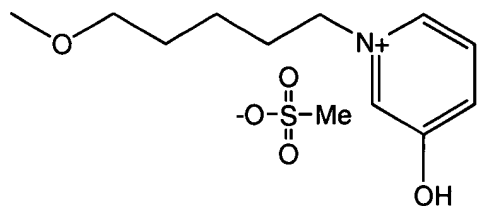


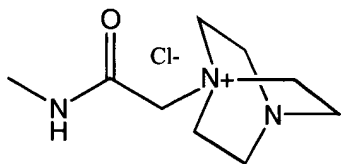
wherein R<sup>29</sup> is as defined in Claim 145.

148. (Currently Amended) A compound of claim 142 wherein R<sup>29</sup> is selected from the group consisting of:









149. (original) A compound of claim 142 wherein:  
 $R^{2E}$  and  $R^{2F}$  are independently selected from ethyl and n-butyl; and  
 $R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.
150. (original) A compound of claim 142 wherein:  
 $R^{2E}$  and  $R^{2F}$  are n-butyl; and  
 $R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.
151. (original) A compound of claim 142 wherein:  
one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl; and  
 $R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.
152. (original) A compound of claim 142 wherein  $R^{2E}$  and  $R^{2F}$  are the same alkyl.
153. (original) A compound of claim 142 wherein  $R^{2E}$  and  $R^{2F}$  are each n-butyl.
154. (original) A compound of claim 142 wherein one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl.
155. (original) A compound of claim 145 wherein:  
 $R^{2E}$  and  $R^{2F}$  are independently selected from ethyl and n-butyl; and  
 $R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.
156. (original) A compound of claim 145 wherein:  
 $R^{2E}$  and  $R^{2F}$  are n-butyl; and

$R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.

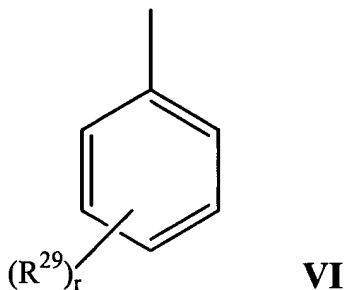
157. (original) A compound of claim 145 wherein:  
one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl; and  
 $R^{25}$  and  $R^{26}$  are independently selected from hydrogen and methoxy.

158. (original) A compound of claim 145 wherein  $R^{2E}$  and  $R^{2F}$  are the same alkyl.

159. (original) A compound of claim 145 wherein  $R^{2E}$  and  $R^{2F}$  are each n-butyl.

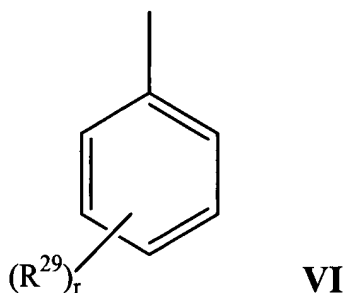
160. (original) A compound of claim 145 wherein one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl.

161. (original) A compound of claim 142 wherein:  
one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl;  
 $R^{25}$  and  $R^{26}$  are hydrogen; and  
 $R^{27}$  is:



wherein  $r$  is 1 and  $R^{29}$  is as defined in claim 142.

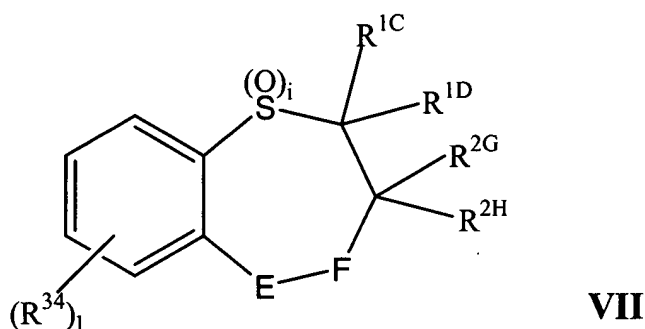
162. (original) A compound of claim 142 wherein:  
one of  $R^{2E}$  and  $R^{2F}$  is ethyl and the other of  $R^{2E}$  and  $R^{2F}$  is n-butyl; and  
 $R^{25}$  and  $R^{26}$  are methoxy; and  
 $R^{27}$  is:



wherein  $r$  is 1 and  $R^{29}$  is as defined in claim 142.

163-166 (Canceled)

167. (Currently Amended) A compound of Formula VII:



wherein:

$i$  is 0, 1 or 2; and

$l$  is 0, 1, 2, 3 or 4; and

$R^{1C}$  and  $R^{1D}$  are independently selected from hydrogen and alkyl; and

$R^{2G}$  and  $R^{2H}$  are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl; or

$R^{2G}$  and  $R^{2H}$  together with the carbon atom to which they are attached form a  $C_{3-10}$  cycloalkyl group; and

one of  $E$  and  $F$  is  $NR^{30}$  and the other of  $E$  and  $F$  is  $CHR^{31}$ ;

$R^{30}$  is  $R^{32}$ ; and

$R^{31}$  is selected from the group consisting of hydrogen and alkyl;

wherein the R<sup>31</sup> alkyl radical is substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the R<sup>31</sup> radical optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the R<sup>31</sup> radical optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein R<sup>7</sup> and R<sup>8</sup> are independently selected from the group consisting of hydrogen; and alkyl; and

wherein R<sup>9</sup>, R<sup>10</sup>, and R<sup>w</sup> are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and



wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN, alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl; guanidinyl;  $-OR^{16}$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{10}R^wA^-$ ;  $-SR^{16}$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^{16}$ ;  $-CO_2R^{16}$ ;  $-CONR^9R^{10}$ ;  $-SO_2NR^9R^{10}$ ;  $-PO(OR^{16})OR^{17}$ ;  $-PR^9R^{10}$ ;  $-P^+R^9R^{10}R^{11}A^-$ ;  $-S^+R^9R^{10}A^-$ ; and carbohydrate residue;

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, quaternary heterocyclalkyl, alkylheterocyclalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{11}R^{12}A^-$ ; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-;  $-NR^9$ -;  $-N^+R^9R^{10}A^-$ ; -S-; -SO-;  $-SO_2$ -;  $-S^+R^9A^-$ ;  $-PR^9$ -;  $-P^+R^9R^{10}A^-$ ;  $-P(O)R^9$ -; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

$R^{32}$  is phenyl substituted with  $-N(H)-X-R^{33}$  or  $-O-X-R^{33}$  wherein:

X is selected from the group consisting of:

- $-(C=O)_s$ -alkyl-;
- $-(C=O)_s$ -alkyl-NH-;
- $-(C=O)_s$ -alkyl-O-;
- $-(C=O)_s$ -alkyl-( $C=O$ )<sub>t</sub>; and
- a covalent bond;

$R_{33}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides;

s and t are independently 0 or 1; and

one or more  $R^{34}$  radicals are independently selected from the group consisting of  $R^{32}$ , hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy;  $-OR^{13}$ ;  $-NR^{13}R^{14}$ ;  $-SR^{13}$ ;  $-S(O)R^{13}$ ;  $-S(O)_2R^{13}$ ;  $-SO_3R^{13}$ ;  $-S^+R^{13}R^{14}A^-$ ;  $-NR^{13}$

OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>14</sup>C(O)R<sup>13</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -OR<sup>18</sup>; -S(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>R<sup>18</sup>; -NR<sup>18</sup>OR<sup>14</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the R<sup>34</sup> alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen; -CN; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the R<sup>34</sup> quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM-OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and carbohydrate residue; and

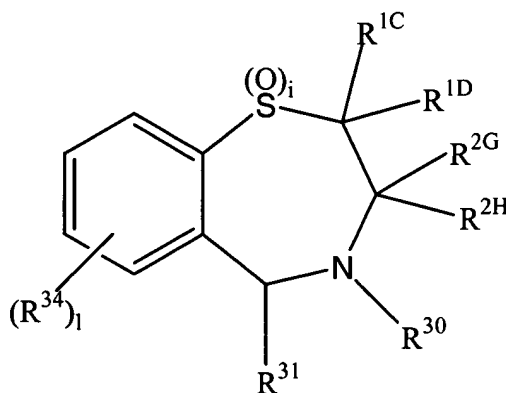
wherein the R<sup>34</sup> radicals comprising carbon optionally may have one or more carbons replaced by -O-; -NR<sup>13</sup>-; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>13</sup>A<sup>-</sup>; -PR<sup>13</sup>-; -P(O)R<sup>13</sup>-; -PR<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; or -P(O)R<sup>9</sup>; and

wherein  $R^{18}$  is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl; and

wherein the  $R^{18}$  alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclalkoxycarbonyl radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-CN$ ;  $NO_2$ ;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{11}R^{12}A^-$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ;  $-CONR^9R^{10}$ ;  $-SO_2OM$ ;  $-SO_2NR^9R^{10}$ ;  $-PR^9R^{10}$ ;  $-P(OR^{13})OR^{14}$ ;  $-PO(OR^{16})OR^{17}$ ; and  $-C(O)OM$ ; or  
a pharmaceutically acceptable salt or solvate thereof.

168-187 (Canceled)

188. (original) A compound corresponding to Formula VIIA:



**VIIA**

wherein:

$i$  is 0, 1 or 2; and

$l$  is 0, 1, 2, 3 or 4; and

$R^{1C}$  and  $R^{1D}$  are independently selected from hydrogen and alkyl; and

$R^{2G}$  and  $R^{2H}$  are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl; or

$R^{2G}$  and  $R^{2H}$  together with the carbon atom to which they are attached form a  $C_{3-7}$  cycloalkyl group; and

$R^{30}$  is  $R^{32}$ ; and

$R^{31}$  is selected from the group consisting of hydrogen and alkyl;

wherein the  $R^{31}$  alkyl radical is independently substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^{31}$  radical optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and

wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the  $R^{30}$  and  $R^{31}$  radicals optionally may have one or more carbons replaced by -O-; -NR<sup>7</sup>-; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>7</sup>A<sup>-</sup>; -PR<sup>7</sup>-; -P(O)R<sup>7</sup>-; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>A<sup>-</sup>; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen; -CN; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclalkyl; carboxy; carboxyalkyl;

guanidinyll;  $-OR^{16}$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{10}R^wA-N^+R^9R^{10}R^wA^-$ ;  $-SR^{16}$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^{16}$ ;  $-CO_2R^{16}$ ;  $-CONR^9R^{10}$ ;  $-SO_2NR^9R^{10}$ ;  $-PO(OR^{16})OR^{17}$ ;  $-PR^9R^{10}$ ;  $-P^+R^9R^{10}R^{11}A^-$ ;  $-S^+R^9R^{10}A^-$ ; and carbohydrate residue;

~~wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with  $N^+R^9R^{11}R^{12}A^-$ ; and~~

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^9-$ ;  $-N^+R^9R^{10}A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^9A^-$ ;  $-PR^9-$ ;  $-P^+R^9R^{10}A^-$ ;  $-P(O)R^9-$ ; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein  $R^{16}$  and  $R^{17}$  are independently selected from the group consisting of  $R^9$  and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

$R^{32}$  is phenyl substituted with  $-N(H)-X-R^{33}$  or  $-O-X-R^{33}$  wherein:

X is selected from the group consisting of:

- $-(C=O)_s$ -alkyl-;
- $-(C=O)_s$ -alkyl-NH-;
- $-(C=O)_s$ -alkyl-O-;
- $-(C=O)_s$ -alkyl- $(C=O)_t$ ; and
- a covalent bond; and

$R_{33}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and

s and t are independently 0 or 1; and

one or more  $R^{34}$  radicals are independently selected from the group consisting of  $R^{32}$ , hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -S(O)<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; ~~OM-OM~~; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>14</sup>C(O)R<sup>13</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -OR<sup>18</sup>; ~~-S(O)NR<sup>13</sup>R<sup>14</sup>~~; -NR<sup>13</sup>R<sup>18</sup>; -NR<sup>18</sup>OR<sup>14</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the  $R^{34}$  alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen; -CN; OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the  $R^{34}$  quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the  $R^{34}$  radicals comprising carbon optionally may have one or more carbons replaced by -O-; -NR<sup>13</sup>-; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>13</sup>A<sup>-</sup>; -PR<sup>13</sup>-; -P(O)R<sup>13</sup>-; -PR<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue;



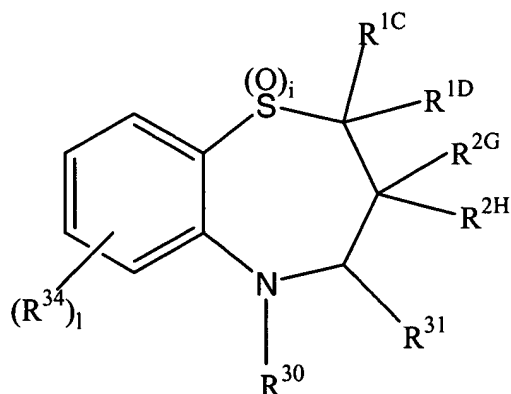
peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>-; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>-; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>-; or -P(O)R<sup>9</sup>-; and

wherein R<sup>18</sup> is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxy carbonyl; arylalkoxy carbonyl; and heterocyclylalkoxy carbonyl; and

wherein the R<sup>18</sup> alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxy carbonyl; arylalkoxy carbonyl; and heterocyclylalkoxy carbonyl radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; NO<sub>2</sub>; -OR<sup>9</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -SR<sup>9</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>9</sup>; -CO<sub>2</sub>R<sup>9</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; and -C(O)OM; or a pharmaceutically acceptable salt or solvate thereof.

189-204 (Canceled).

205. (Currently Amended) A compound of ~~claim 163~~ corresponding to Formula VIIB:



wherein:

i is 0, 1 or 2; and

l is 0, 1, 2, 3 or 4; and  
R<sup>1C</sup> and R<sup>1D</sup> are independently selected from hydrogen and alkyl; and  
R<sup>2G</sup> and R<sup>2H</sup> are independently selected from hydrogen, alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkylalkyl, aryl and aralkyl; or  
R<sup>2G</sup> and R<sup>2H</sup> together with the carbon atom to which they are attached form a C<sub>3-7</sub> cycloalkyl group; and  
R<sup>30</sup> and R<sup>31</sup> are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; aryl; heterocyclyl; acyl, thioacyl, -OR<sup>9</sup>, and R<sup>32</sup>;  
wherein the R<sup>30</sup> and R<sup>31</sup> alkyl; cycloalkyl; aryl; heterocyclyl radicals are independently substituted with one or more radicals independently selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; polyalkyl; haloalkyl; hydroxyalkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -NR<sup>13</sup>C(O)R<sup>14</sup>; -NR<sup>13</sup>C(O)NR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>CO<sub>2</sub>R<sup>14</sup>; -OC(O)R<sup>13</sup>; -OC(O)NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>SOR<sup>14</sup>; -NR<sup>13</sup>SO<sub>2</sub>R<sup>14</sup>; -NR<sup>13</sup>SONR<sup>14</sup>R<sup>15</sup>; -NR<sup>13</sup>SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -P(OR<sup>13</sup>)OR<sup>14</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; and -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; and  
wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of the R<sup>30</sup> and R<sup>31</sup> radicals optionally may be further substituted with one or more radicals selected from the group consisting of -CN; halogen; hydroxy; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclyl; -OR<sup>7</sup>; -NR<sup>7</sup>R<sup>8</sup>; -SR<sup>7</sup>; -S(O)R<sup>7</sup>; -SO<sub>2</sub>R<sup>7</sup>; -SO<sub>3</sub>R<sup>7</sup>; -CO<sub>2</sub>R<sup>7</sup>; -CONR<sup>7</sup>R<sup>8</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -N<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; -P(O)R<sup>7</sup>R<sup>8</sup>; -PR<sup>7</sup>R<sup>8</sup>; -P<sup>+</sup>R<sup>7</sup>R<sup>8</sup>R<sup>9</sup>A<sup>-</sup>; and -P(O)(OR<sup>7</sup>)OR<sup>8</sup>; and  
wherein the alkyl, polyalkyl, haloalkyl, hydroxyalkyl, cycloalkyl, alkenyl, alkynyl, aryl, heterocyclyl, quaternary heterocyclyl, arylalkyl, heterocyclalkyl, and polyether substituents of

the  $R^{30}$  and  $R^{31}$  radicals optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^7-$ ;  $-N^+R^7R^8A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^7A^-$ ;  $-PR^7-$ ;  $-P(O)R^7-$ ;  $-P^+R^7R^8A^-$ ; or phenylene; and

wherein  $R^7$  and  $R^8$  are independently selected from the group consisting of hydrogen; and alkyl; and

wherein  $R^9$ ,  $R^{10}$ , and  $R^W$  are independently selected from the group consisting of hydrogen; alkyl; cycloalkyl; alkenyl; alkynyl; aryl; heterocyclyl; alkylaminoalkyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; carboxyaryl; carboxyheterocyclyl; amino; alkylamino; carboxyalkylamino; alkoxyalkylamino; and acyl; and

wherein  $R^{11}$  and  $R^{12}$  are independently selected from the group consisting of hydrogen;  $-CN$ ; halogen; alkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; carboxyalkyl; alkoxyalkyl; carboalkoxyalkyl; cycloalkyl; cycloalkenyl; haloalkyl; hydroxyalkyl; cyanoalkyl;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ; and  $-CONR^9R^{10}$ ; or

$R^{11}$  and  $R^{12}$  together with the carbon atom to which they are attached form a cyclic ring; and

wherein  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  are independently selected from the group consisting of hydrogen; alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether; or

wherein  $R^{13}$  and  $R^{14}$  together with the nitrogen atom to which they are attached form a mono- or polycyclic heterocyclyl that is optionally substituted with one or more radicals selected from the group consisting of carboxy, and quaternary salts; or

wherein  $R^{14}$  and  $R^{15}$  together with the nitrogen atom to which they are attached form a cyclic ring; and

wherein the  $R^{13}$ ,  $R^{14}$ , and  $R^{15}$  alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; quaternary heterocyclalkyl; alkylarylalkyl; alkylheterocyclalkyl; alkylaminoalkyl; aminoalkyl;

aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; alkyl; haloalkyl; hydroxyalkyl; sulfoalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; quaternary heterocyclylalkyl; carboxy; carboxyalkyl; guanidiny; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>11</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue;

~~wherein R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl, polyether, aryl, quaternary heterocyclyl, arylalkyl, heterocyclylalkyl, quaternary heterocyclylalkyl, alkylheterocyclylalkyl, and alkylaminoalkyl optionally may be substituted with N<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; and~~

wherein the R<sup>13</sup>, R<sup>14</sup>, and R<sup>15</sup> alkyl; haloalkyl; cycloalkyl; polyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; quaternary heterocyclylalkyl; alkylarylalkyl; alkylheterocyclylalkyl; alkylaminoalkyl; aminoalkyl; aminocarbonylalkyl; alkylaminocarbonylalkyl; carboxyalkylaminocarbonylalkyl; and polyether radicals optionally may have one or more carbons replaced by -O-; -NR<sup>9</sup>-; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -S-; -SO-; -SO<sub>2</sub>-; -S<sup>+</sup>R<sup>9</sup>A<sup>-</sup>; -PR<sup>9</sup>-; -P<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; -P(O)R<sup>9</sup>-; phenylene; carbohydrate residue; amino acid residue; peptide residue; or polypeptide residue; and

wherein R<sup>16</sup> and R<sup>17</sup> are independently selected from the group consisting of R<sup>9</sup> and M; and

wherein A is a pharmaceutically acceptable anion and M is a pharmaceutically acceptable cation; and

R<sup>32</sup> is selected from the group consisting of cycloalkyl, aryl and heterocyclyl, wherein said cycloalkyl, aryl and heterocyclyl are substituted with -N(H)-X-R<sup>33</sup> or -O-X-R<sup>33</sup> and wherein:

X is selected from the group consisting of:

- (C=O)<sub>s</sub>-alkyl-;
- (C=O)<sub>s</sub>-alkyl-NH-;
- (C=O)<sub>s</sub>-alkyl-O-;

$-(C=O)_s$ -alkyl-(C=O)<sub>i</sub>; and

a covalent bond; and

R<sub>33</sub> is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides, wherein said monosaccharides, disaccharides, and polysaccharides may be protected with one or more sugar protecting groups; and

s and t are independently 0 or 1; and

one or more R<sup>34</sup> radicals are independently selected from the group consisting of R<sup>32</sup>, hydrogen; halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -S(O)<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -S<sup>+</sup>R<sup>13</sup>R<sup>14</sup>A<sup>-</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>14</sup>C(O)R<sup>13</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -C(O)OM; -COR<sup>13</sup>; -OR<sup>18</sup>; -S(O)<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -NR<sup>13</sup>R<sup>18</sup>; -NR<sup>18</sup>OR<sup>14</sup>; -N<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; -PR<sup>13</sup>R<sup>14</sup>; -P(O)R<sup>13</sup>R<sup>14</sup>; -P<sup>+</sup>R<sup>13</sup>R<sup>14</sup>R<sup>15</sup>A<sup>-</sup>; amino acid residue; peptide residue; polypeptide residue; and carbohydrate residue;

wherein the R<sup>34</sup> alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; acyloxy radicals optionally may be further substituted with one or more radicals selected from the group consisting of halogen; -CN; -OR<sup>16</sup>; -NR<sup>9</sup>R<sup>10</sup>; -N<sup>+</sup>R<sup>9</sup>R<sup>10</sup>R<sup>w</sup>A<sup>-</sup>; -SR<sup>16</sup>; -S(O)R<sup>9</sup>; -SO<sub>2</sub>R<sup>9</sup>; -SO<sub>3</sub>R<sup>16</sup>; -CO<sub>2</sub>R<sup>16</sup>; -CONR<sup>9</sup>R<sup>10</sup>; -SO<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>; -PO(OR<sup>16</sup>)OR<sup>17</sup>; -PR<sup>9</sup>R<sup>10</sup>; -P<sup>+</sup>R<sup>9</sup>R<sup>11</sup>R<sup>12</sup>A<sup>-</sup>; -S<sup>+</sup>R<sup>9</sup>R<sup>10</sup>A<sup>-</sup>; and carbohydrate residue; and

wherein the R<sup>34</sup> quaternary heterocyclyl radical optionally may be substituted with one or more radicals selected from the group consisting of halogen; -CN; -NO<sub>2</sub>; alkyl; cycloalkyl; polyalkyl; haloalkyl; hydroxyalkyl; alkenyl; alkynyl; aryl; heterocyclyl; arylalkyl; heterocyclalkyl; polyether; -OR<sup>13</sup>; -NR<sup>13</sup>R<sup>14</sup>; -SR<sup>13</sup>; -S(O)R<sup>13</sup>; -SO<sub>2</sub>R<sup>13</sup>; -SO<sub>3</sub>R<sup>13</sup>; -NR<sup>13</sup>OR<sup>14</sup>; -NR<sup>13</sup>NR<sup>14</sup>R<sup>15</sup>; -CO<sub>2</sub>R<sup>13</sup>; -OM-OM; -SO<sub>2</sub>OM; -SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup>; -C(O)NR<sup>13</sup>R<sup>14</sup>; -

$C(O)OM$ ;  $-COR^{13}$ ;  $-P(O)R^{13}R^{14}$ ;  $-PR^{13}R^{14}$ ;  $-P^+R^{13}R^{14}R^{15}A^-$ ;  $-P(OR^{13})OR^{14}$ ;  $-S^+R^{13}R^{14}A^-$ ;  $-N^+R^{13}R^{14}R^{15}A^-$ ; and carbohydrate residue; and

wherein the  $R^{34}$  radicals comprising carbon optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^{13}-$ ;  $-N^+R^{13}R^{14}A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^{13}A^-$ ;  $-PR^{13}-$ ;  $-P(O)R^{13}-$ ;  $-PR^{13}R^{14}$ ;  $-P^+R^{13}R^{14}A^-$ ; phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; polyether; or polyalkyl; wherein said phenylene; amino acid residue; peptide residue; polypeptide residue; carbohydrate residue; and polyalkyl optionally may have one or more carbons replaced by  $-O-$ ;  $-NR^9-$ ;  $-N^+R^9R^{10}A^-$ ;  $-S-$ ;  $-SO-$ ;  $-SO_2-$ ;  $-S^+R^9A^-$ ;  $-PR^9-$ ;  $-P^+R^9R^{10}A^-$ ; or  $-P(O)R^9-$ ; and

wherein  $R^{18}$  is selected from the group consisting of alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclylalkoxycarbonyl; and

wherein the  $R^{18}$  alkyl; alkenyl; alkynyl; aryl; heterocyclyl; quaternary heterocyclyl; arylalkyl; heterocyclylalkyl; acyl; alkoxycarbonyl; arylalkoxycarbonyl; and heterocyclylalkoxycarbonyl radicals optionally may be substituted with one or more radicals selected from the group consisting of halogen;  $-CN$ ;  $NO_2$ ;  $-OR^9$ ;  $-NR^9R^{10}$ ;  $-N^+R^9R^{11}R^{12}A^-$ ;  $-SR^9$ ;  $-S(O)R^9$ ;  $-SO_2R^9$ ;  $-SO_3R^9$ ;  $-CO_2R^9$ ;  $-CONR^9R^{10}$ ;  $-SO_2OM$ ;  $-SO_2NR^9R^{10}$ ;  $-PR^9R^{10}$ ;  $-P(OR^{13})OR^{14}$ ;  $-PO(OR^{16})OR^{17}$ ; and  $-C(O)OM$ ; or

a pharmaceutically acceptable salt or solvate thereof;  
provided that at least one of  $R^{30}$ ,  $R^{31}$  and  $R^{34}$  is  $R^{32}$ .

206. (original) A compound of Claim 205 wherein  $R^{32}$  is phenyl substituted with  $-N(H)-X-R^{33}$  or  $-O-X-R^{33}$  wherein:

X is selected from the group consisting of:

$-(C=O)_s$ -alkyl-;  
 $-(C=O)_s$ -alkyl-NH-;

$-(C=O)_s\text{-alkyl-O-}$ ;  
 $-(C=O)_s\text{-alkyl-(C=O)}_t$ ; and  
a covalent bond; and

$R_{33}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and  
 $s$  and  $t$  are independently 0 or 1.

207. (original) A compound of Claim 206 wherein  $R^{32}$  is phenyl substituted at the para-position with  $-N(H)\text{-X-R}^{33}$  or  $-O\text{-X-R}^{33}$  wherein:

$X$  is selected from the group consisting of:

$-(C=O)_s\text{-alkyl-}$ ;  
 $-(C=O)_s\text{-alkyl-NH-}$ ;  
 $-(C=O)_s\text{-alkyl-O-}$ ;  
 $-(C=O)_s\text{-alkyl-(C=O)}_t$ ; and  
a covalent bond; and

$R^{33}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and  
 $s$  and  $t$  are independently 0 or 1.

208. (original) A compound of Claim 206 wherein  $R^{32}$  is phenyl substituted at the meta-position with  $-N(H)\text{-X-R}^{33}$  or  $-O\text{-X-R}^{33}$  wherein:

$X$  is selected from the group consisting of:

$-(C=O)_s\text{-alkyl-}$ ;  
 $-(C=O)_s\text{-alkyl-NH-}$ ;  
 $-(C=O)_s\text{-alkyl-O-}$ ;  
 $-(C=O)_s\text{-alkyl-(C=O)}_t$ ; and  
a covalent bond; and

$R_{33}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and

s and t are independently 0 or 1.

209. (original) A compound of claim 206 wherein:

$R^{30}$  is  $R^{32}$ ; and

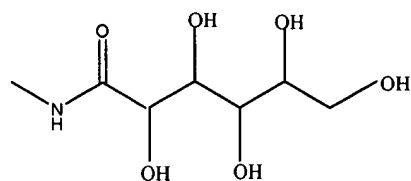
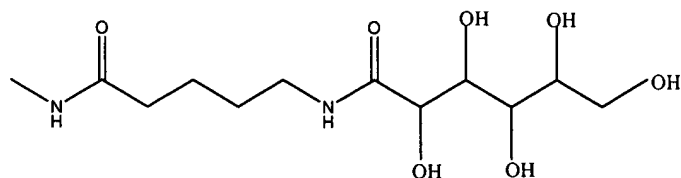
$R^{31}$  is selected from the group consisting of hydrogen and alkyl.

210. (original) A compound of claim 206 wherein:

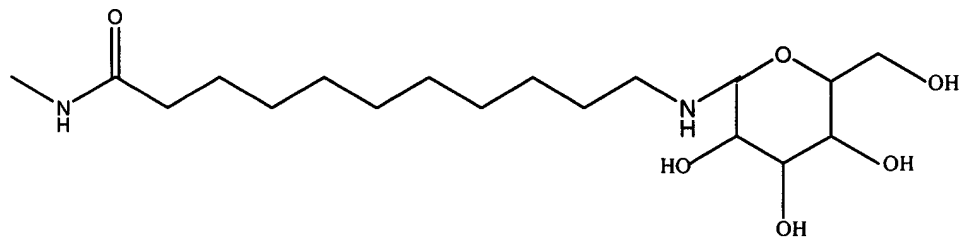
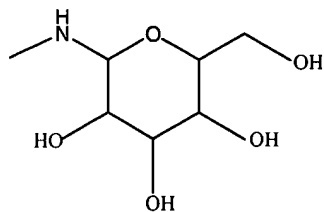
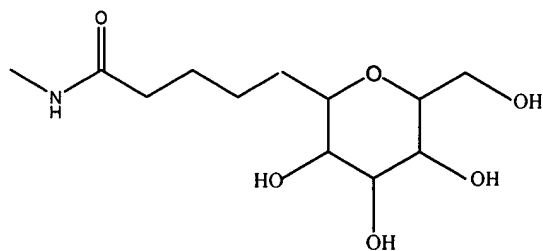
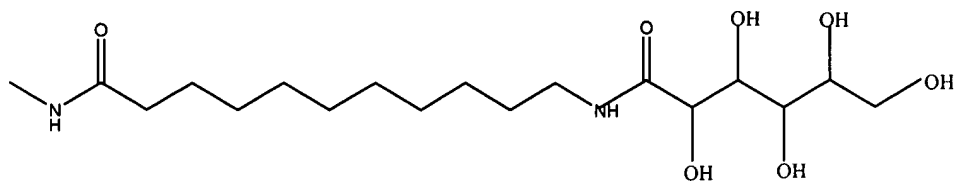
$R^{30}$  is selected from the group consisting of hydrogen and alkyl; and

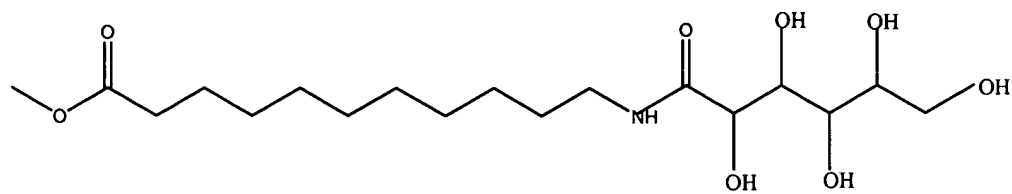
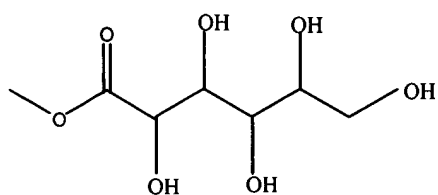
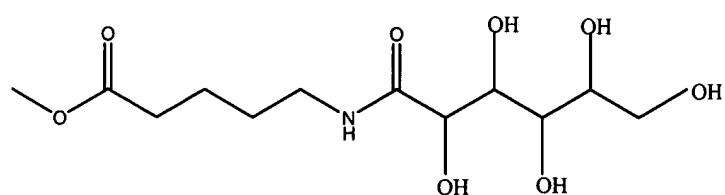
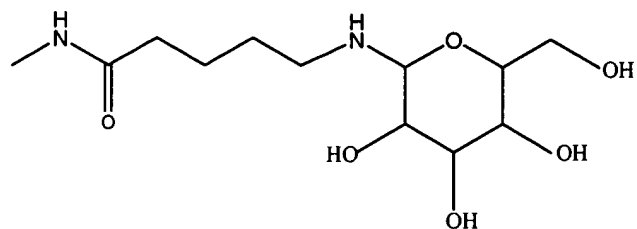
$R^{31}$  is  $R^{32}$ .

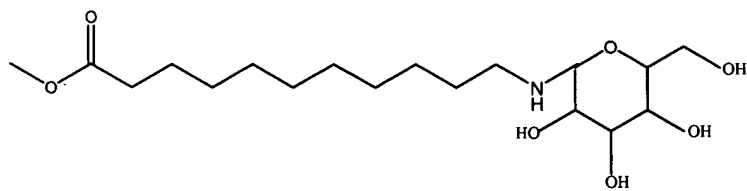
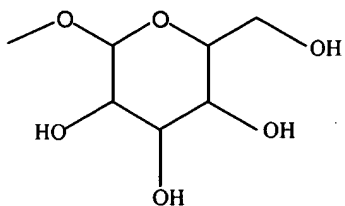
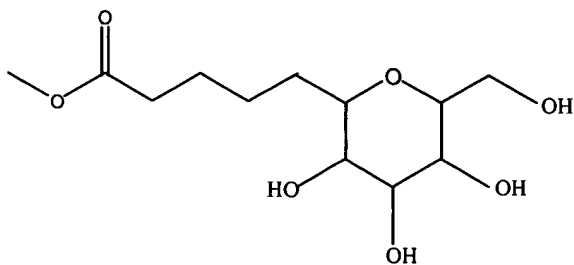
211. (Currently Amended) A compound of claim 206 wherein  $R^{32}$  is phenyl substituted with a radical selected from the group consisting of:



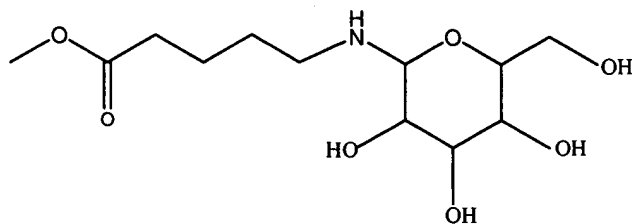






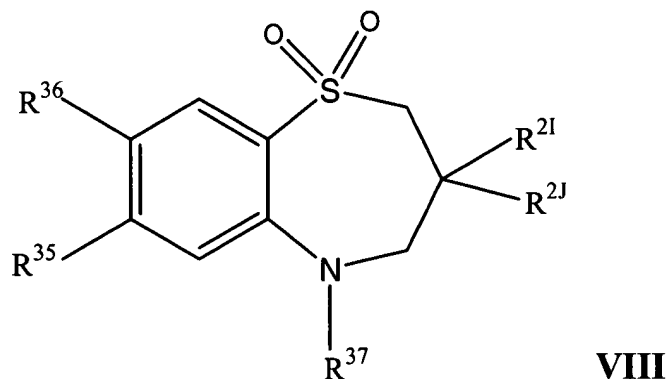


and



212. (original) A compound of claim 206 wherein:  
i is 2;  
 $R^{1C}$  and  $R^{1D}$  are independently selected from hydrogen and alkyl; and  
 $R^{2G}$  and  $R^{2H}$  are independently selected from hydrogen and alkyl.
213. (original) A compound of claim 206 wherein:  
i is 2;  
 $R^{1C}$  and  $R^{1D}$  are hydrogen; and  
 $R^{2G}$  and  $R^{2H}$  are independently selected from alkyl.
214. (original) A compound of claim 206 wherein:  
i is 2;  
 $R^{1C}$  and  $R^{1D}$  are hydrogen; and  
 $R^{2G}$  and  $R^{2H}$  are independently selected from ethyl, propyl and butyl.
215. (original) A compound of claim 206 wherein i is 1 or 2.
216. (original) A compound of claim 206 wherein i is 2.
217. (original) A compound of claim 206 wherein  $R^{1C}$  and  $R^{1D}$  are hydrogen.
218. (original) A compound of claim 206 wherein  $R^{2G}$  and  $R^{2H}$  are independently selected from the group consisting of hydrogen and  $C_{1-6}$ alkyl.
219. (original) A compound of claim 206 wherein  $R^{2G}$  and  $R^{2H}$  are independently selected from the group consisting  $C_{1-6}$ alkyl.
220. (original) A compound of claim 206 wherein  $R^{2G}$  and  $R^{2H}$  are the same alkyl.

221. (original) A compound of claim 206 wherein  $R^{2G}$  and  $R^{2H}$  are each n-butyl.
222. (original) A compound of claim 206 wherein one of  $R^{2G}$  and  $R^{2H}$  is ethyl and the other of  $R^{2G}$  and  $R^{2H}$  is n-butyl.
223. (original) A compound of claim 206 wherein one or more  $R^{34}$  are independently selected from methoxy and dimethylamino.
224. (original) A compound of claim 206 wherein  
i is 1 or 2;  
 $R^{1C}$  and  $R^{1D}$  are hydrogen;  
 $R^{2G}$  and  $R^{2H}$  are n-butyl; and  
one or more  $R^{34}$  are independently selected from methoxy and dimethylamino.
225. (original) A compound of claim 206 wherein  
i is 1 or 2;  
 $R^{1C}$  and  $R^{1D}$  are hydrogen;  
one of  $R^{2G}$  and  $R^{2H}$  is ethyl and the other of  $R^{2G}$  and  $R^{2H}$  is n-butyl; and  
one or more  $R^{34}$  are independently selected from methoxy and dimethylamino.
226. (Previously amended) A compound of Formula VIII:



wherein:

$R^{21}$  and  $R^{2j}$  are independently selected from  $C_{1-6}$  alkyl; and

$R^{35}$  is selected from the group consisting of halogen and  $R^{38}$ ;

$R^{36}$  is selected from the group consisting of hydroxy, alkoxy, and  $R^{38}$ ;

wherein  $R^{38}$  is selected from the group consisting of cycloalkyl, aryl and heterocyclyl,

wherein said cycloalkyl, aryl and heterocyclyl are substituted with  $-N(H)-X-R^{39}$  or  $-O-X-R^{39}$  and

wherein:

X is selected from the group consisting of:

$-(C=O)_u$ -alkyl-;

$-(C=O)_u$ -alkyl-NH-;

$-(C=O)_u$ -alkyl-O-;

$-(C=O)_u$ -alkyl- $(C=O)_v$ ; and

a covalent bond; and

$R^{39}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides, wherein said monosaccharides, disaccharides, and polysaccharides may be protected with one or more sugar protecting groups; and

u and v are independently 0 or 1; and

$R^{37}$  is unsubstituted phenyl or  $R^{38}$ ; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of  $R^{35}$ ,  $R^{36}$  and  $R^{37}$  is  $R^{38}$ .

227. (original) A compound of Claim 226 wherein  $R^{38}$  is phenyl substituted with  $-N(H)-X-R^{39}$  or  $-O-X-R^{39}$  wherein:

X is selected from the group consisting of:

$-(C=O)_u$ -alkyl-;

$-(C=O)_u$ -alkyl-NH-;

$-(C=O)_u$ -alkyl-O-;

$-(C=O)_u$ -alkyl- $(C=O)_v$ ; and

a covalent bond; and

$R^{39}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and  
u and v are independently 0 or 1.

228. (original) A compound of Claim 227 wherein  $R^{38}$  is phenyl substituted at the para-position with  $-N(H)-X-R^{39}$  or  $-O-X-R^{39}$  wherein:

X is selected from the group consisting of:

$-(C=O)_u\text{-alkyl-}$ ;  
 $-(C=O)_u\text{-alkyl-NH-}$ ;  
 $-(C=O)_u\text{-alkyl-O-}$ ;  
 $-(C=O)_u\text{-alkyl-(C=O)}_v$ ; and  
a covalent bond; and

$R^{39}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and  
u and v are independently 0 or 1.

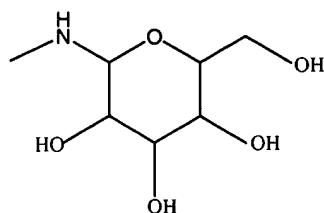
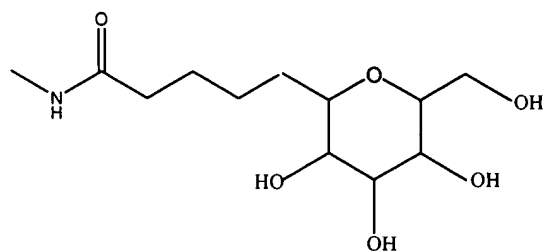
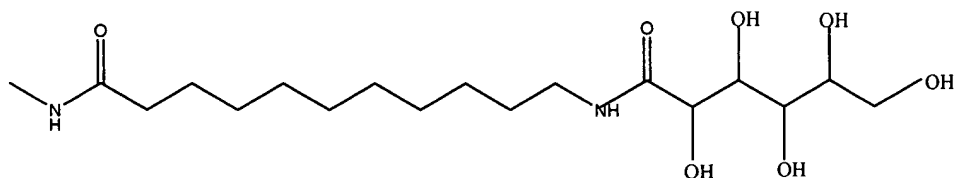
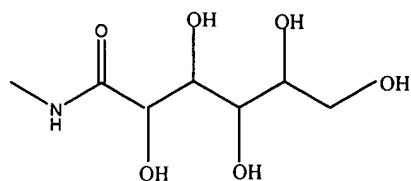
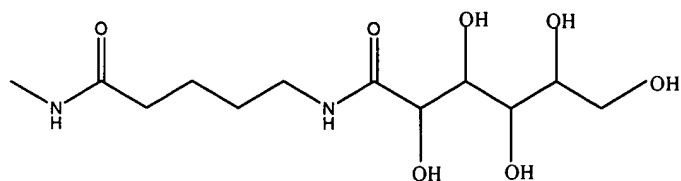
229. (original) A compound of Claim 227 wherein  $R^{38}$  is phenyl substituted at the meta-position with  $-N(H)-X-R^{39}$  or  $-O-X-R^{39}$  wherein:

X is selected from the group consisting of:

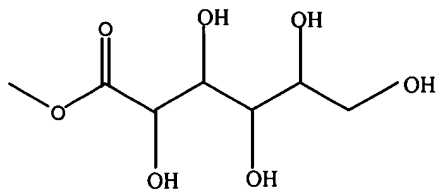
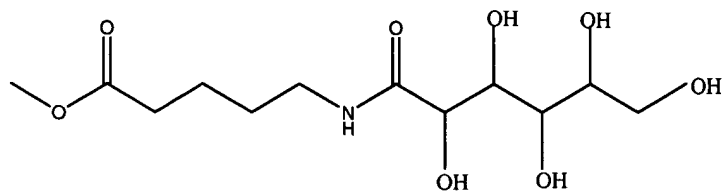
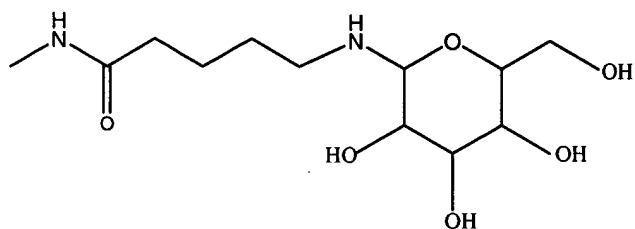
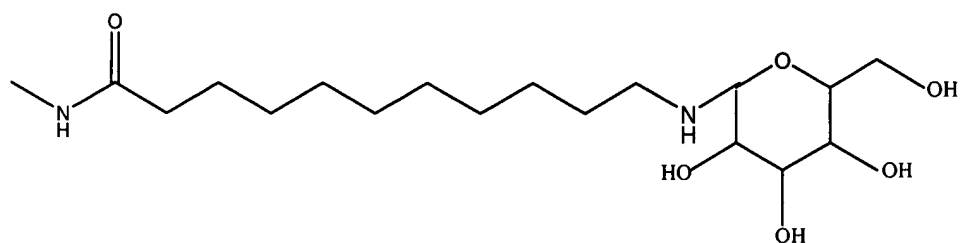
$-(C=O)_u\text{-alkyl-}$ ;  
 $-(C=O)_u\text{-alkyl-NH-}$ ;  
 $-(C=O)_u\text{-alkyl-O-}$ ;  
 $-(C=O)_u\text{-alkyl-(C=O)}_v$ ; and  
a covalent bond; and

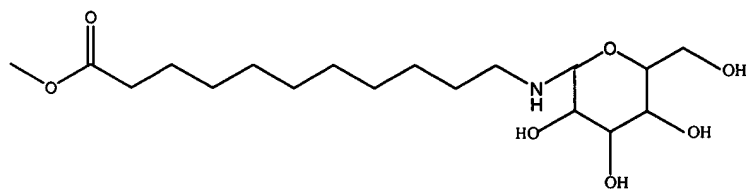
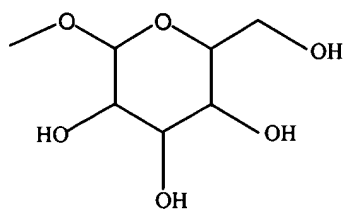
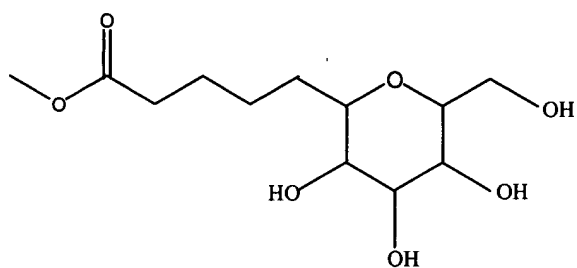
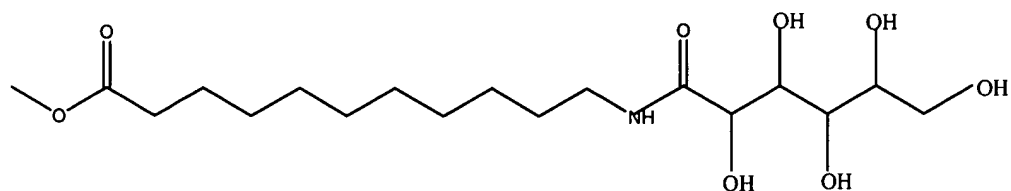
$R^{39}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and  
u and v are independently 0 or 1.

230. (Currently Amended) A compound of claim 227 wherein R<sup>38</sup> is phenyl substituted with a radical selected from the group consisting of:

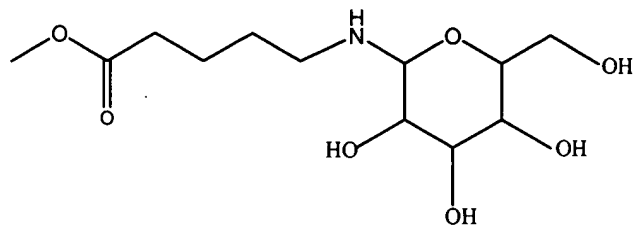






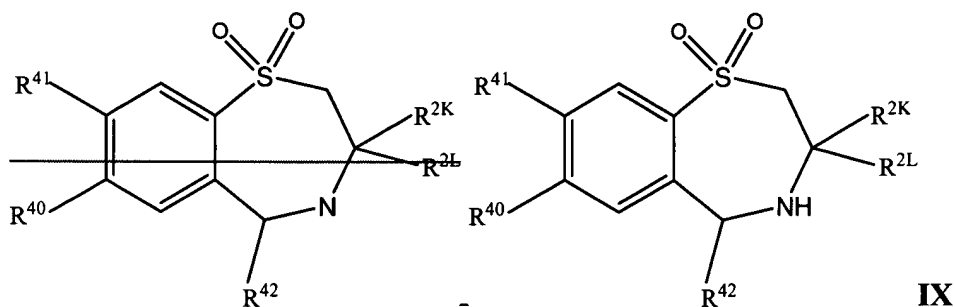


and



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237. (Currently Amended) A compound of Formula IX:



wherein:

$R^{2K}$  and  $R^{2L}$  are independently selected from  $C_{1-6}$  alkyl; and

$R^{40}$  and  $R^{41}$  are independently selected from the group consisting of hydrogen, alkoxy, and  $R^{43}$ ;

wherein  $R^{43}$  is selected from the group consisting of cycloalkyl, aryl and heterocyclyl, wherein said cycloalkyl, aryl and heterocyclyl are substituted with  $-N(H)-X-R^{44}$  or  $-O-X-R^{44}$  and wherein:

X is selected from the group consisting of:

- $-(C=O)_a\text{-alkyl-}$ ;
- $-(C=O)_a\text{-alkyl-NH-}$ ;
- $-(C=O)_a\text{-alkyl-O-}$ ;
- $-(C=O)_a\text{-alkyl-(C=O)}_b$ ; and
- a covalent bond; and

$R^{44}$  is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides, wherein said monosaccharides, disaccharides, and polysaccharides may be protected with one or more sugar protecting groups; and

a and b are independently 0 or 1; and

$R^{42}$  is unsubstituted phenyl or  $R^{43}$ ; or

a pharmaceutically acceptable salt or solvate thereof;

provided that at least one of  $R^{40}$ ,  $R^{41}$  and  $R^{42}$  is  $R^{43}$ .

238. (original) A compound of Claim 237 wherein  $R^{43}$  is phenyl substituted with  $-N(H)-X-R^{44}$  or  $-O-X-R^{44}$  wherein:

X is selected from the group consisting of:

- (C=O)<sub>a</sub>-alkyl-;
- (C=O)<sub>a</sub>-alkyl-NH-;
- (C=O)<sub>a</sub>-alkyl-O-;
- (C=O)<sub>a</sub>-alkyl-(C=O)<sub>b</sub>; and
- a covalent bond; and

R<sup>44</sup> is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and

a and b are independently 0 or 1.

239. (original) A compound of Claim 238 wherein R<sup>43</sup> is phenyl substituted at the para-position with -N(H)-X-R<sup>44</sup> or -O-X-R<sup>44</sup> wherein:

X is selected from the group consisting of:

- (C=O)<sub>a</sub>-alkyl-;
- (C=O)<sub>a</sub>-alkyl-NH-;
- (C=O)<sub>a</sub>-alkyl-O-;
- (C=O)<sub>a</sub>-alkyl-(C=O)<sub>b</sub>; and
- a covalent bond; and

R<sup>44</sup> is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and

a and b are independently 0 or 1.

240. (original) A compound of Claim 238 wherein R<sup>43</sup> is phenyl substituted at the meta-position with -N(H)-X-R<sup>44</sup> or -O-X-R<sup>44</sup> wherein:

X is selected from the group consisting of:

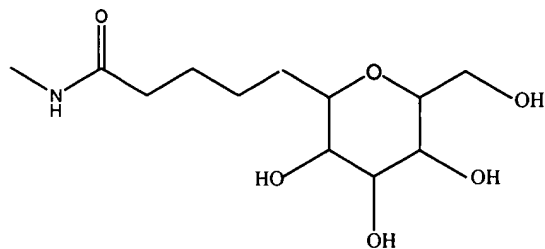
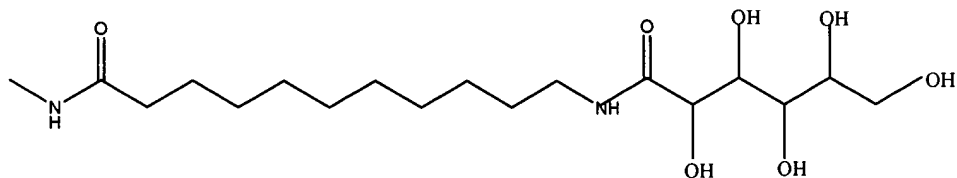
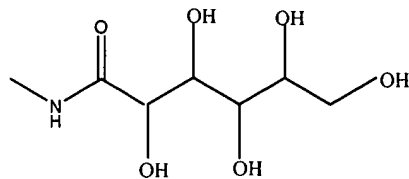
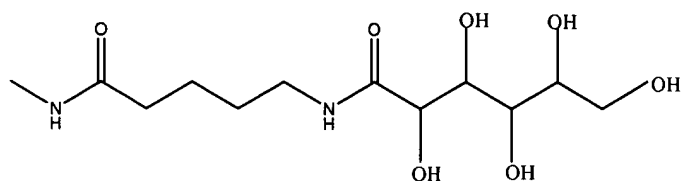
- (C=O)<sub>a</sub>-alkyl-;
- (C=O)<sub>a</sub>-alkyl-NH-;
- (C=O)<sub>a</sub>-alkyl-O-;
- (C=O)<sub>a</sub>-alkyl-(C=O)<sub>b</sub>; and

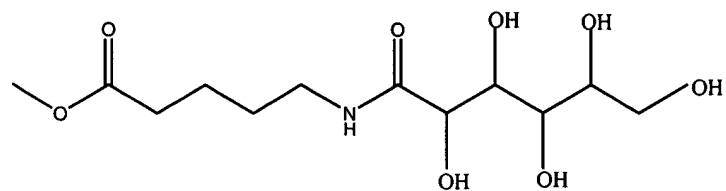
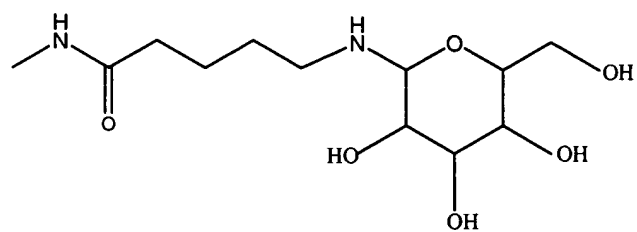
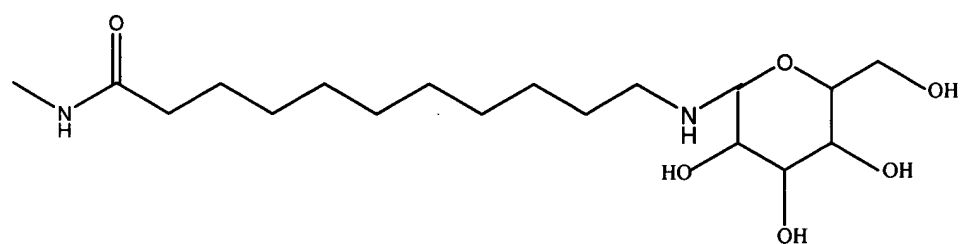
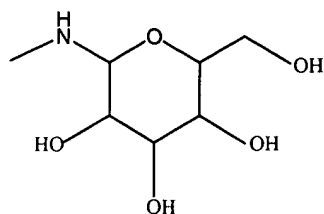
a covalent bond; and

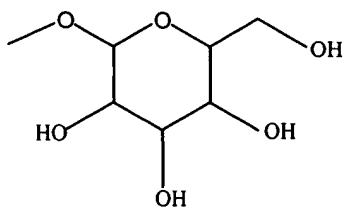
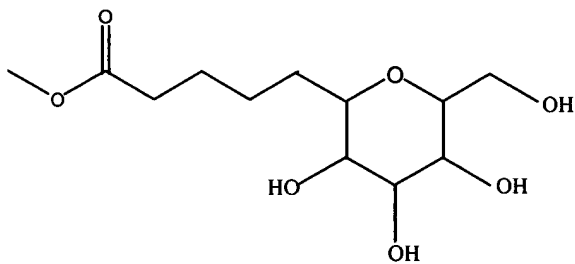
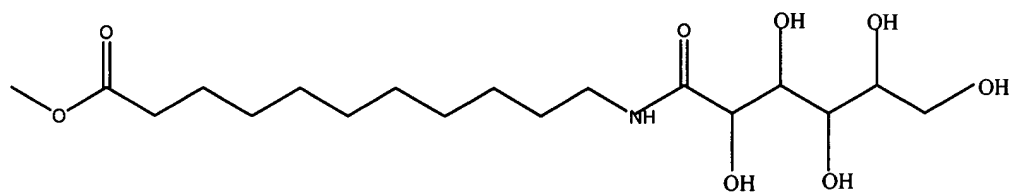
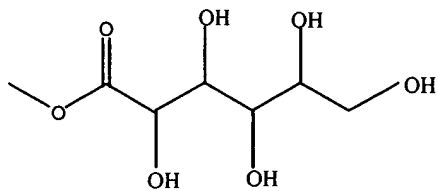
R<sup>44</sup> is selected from selected from the group consisting of monosaccharides, disaccharides, and polysaccharides; and

a and b are independently 0 or 1.

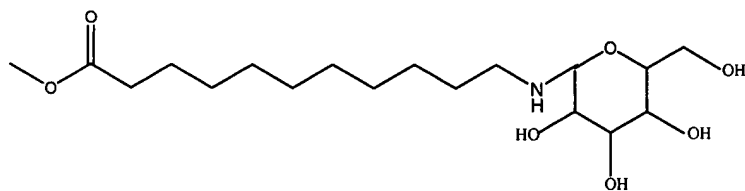
241. (Currently Amended) A compound of claim 238 wherein R<sup>43</sup> is phenyl substituted with a radical selected from the group consisting of:



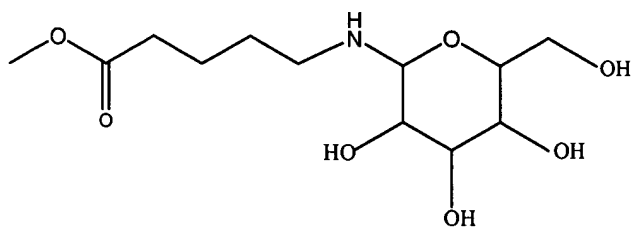








and



242. (original) A compound of claim 238 wherein:  
 $R^{2K}$  and  $R^{2L}$  are independently selected from ethyl and n-butyl; and  
 $R^{40}$  and  $R^{41}$  are independently selected from hydrogen and methoxy.

243. (original) A compound of claim 238 wherein:  
 $R^{2K}$  and  $R^{2L}$  are n-butyl; and  
 $R^{40}$  and  $R^{41}$  are independently selected from hydrogen and methoxy.

244. (original) A compound of claim 238 wherein:  
one of  $R^{2K}$  and  $R^{2L}$  is ethyl and the other of  $R^{2K}$  and  $R^{2L}$  is n-butyl; and  
 $R^{40}$  and  $R^{41}$  are independently selected from hydrogen and methoxy.

245. (original) A compound of claim 238 wherein  $R^{2K}$  and  $R^{2L}$  are the same alkyl.

246. (original) A compound of claim 238 wherein  $R^{2K}$  and  $R^{2L}$  are each n-butyl.

247. (original) A compound of claim 238 wherein one of R<sup>2K</sup> and R<sup>2L</sup> is ethyl and the other of R<sup>2K</sup> and R<sup>2L</sup> is n-butyl.

248. (original) A compound of claim 238 wherein:  
one of R<sup>2K</sup> and R<sup>2L</sup> is ethyl and the other of R<sup>2K</sup> and R<sup>2L</sup> is n-butyl; and  
R<sup>40</sup> and R<sup>41</sup> are hydrogen.

249. (original) A compound of claim 238 wherein:  
one of R<sup>2K</sup> and R<sup>2L</sup> is ethyl and the other of R<sup>2K</sup> and R<sup>2L</sup> is n-butyl; and  
R<sup>40</sup> and R<sup>41</sup> are methoxy.

250. (Previously amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a compound of Formula I according to any one of claims 1 to 120, or a pharmaceutically acceptable salt or solvate thereof.

251. (Previously amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a compound of Formula III according to any one of claims 121 to 140, or a pharmaceutically acceptable salt or solvate thereof.

252. (Previously amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a compound of Formula V according to any one of claims 141 to 162, or a pharmaceutically acceptable salt or solvate thereof.

253. (Currently Amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a

compound of Formula VII according to any one of claims 167, 188, and 205 to 225, or a pharmaceutically acceptable salt or solvate thereof.

254. (Previously amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a compound of Formula VIII according to any one of claims 226 to 236, or a pharmaceutically acceptable salt or solvate thereof.

255. (Currently Amended) A method of treating a hyperlipidemic condition in a subject comprising administering to the subject a therapeutically effective amount of a compound of Formula IX according to any one of claims 237 to 249, or a pharmaceutically acceptable salt or solvate thereof.

256. (Currently Amended) The method of claim 250 wherein the hyperlipidemic condition is atherosclerosis.

257. (Previously amended) A pharmaceutical composition comprising a compound of Formula I according to any one of claims 1 to 120 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

258. (Previously amended) A pharmaceutical composition comprising a compound of Formula III according to any one of claims 121 to 140 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

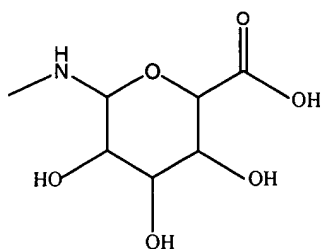
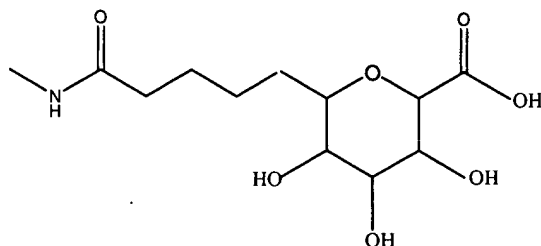
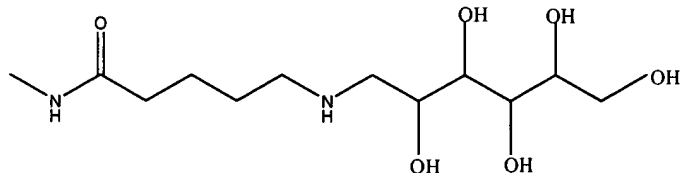
259. (Previously amended) A pharmaceutical composition comprising a compound of Formula V according to any one of claims 141 to 162 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

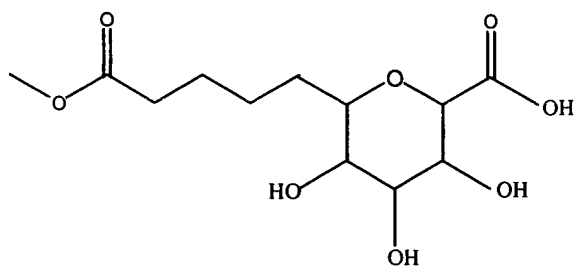
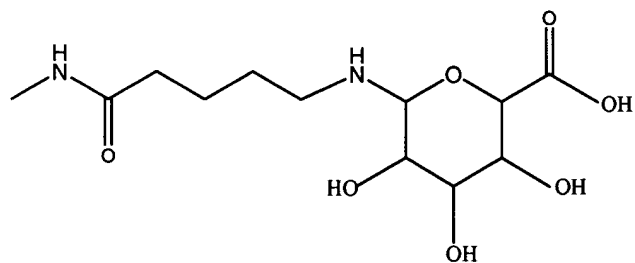
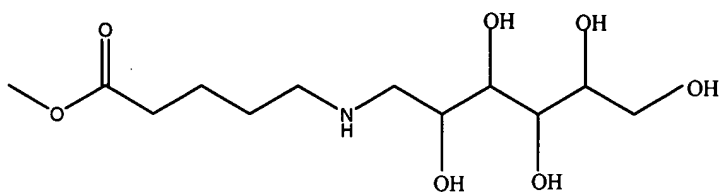
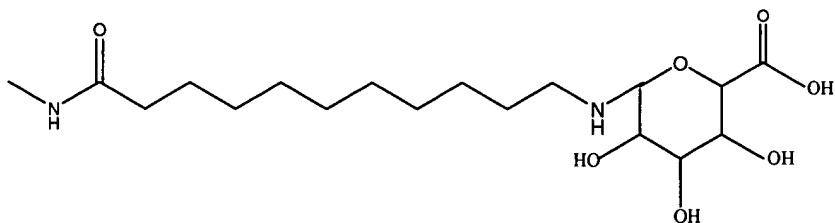
260. (Previously amended) A pharmaceutical composition comprising a compound of Formula VII according to any one of claims 167, 188, and 205 to 225 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

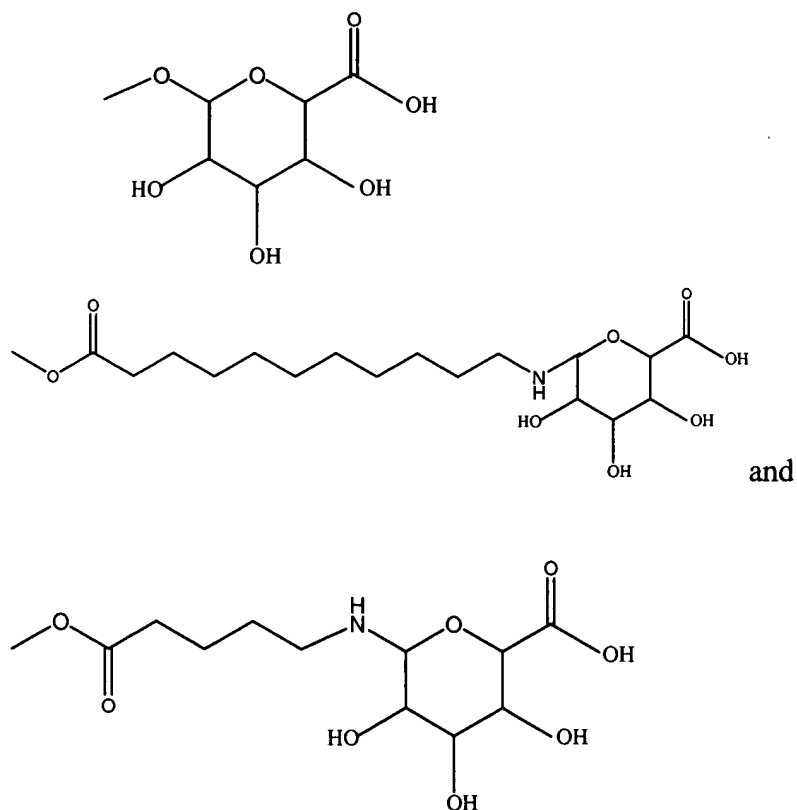
261. (Previously amended) A pharmaceutical composition comprising a compound of Formula VIII according to any one of claims 226 to 236 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

262. (Currently Amended) A pharmaceutical composition comprising a compound of Formula IX according to any one of claims 237 to 249 or a pharmaceutically acceptable salt or solvate thereof, and a pharmaceutically acceptable carrier.

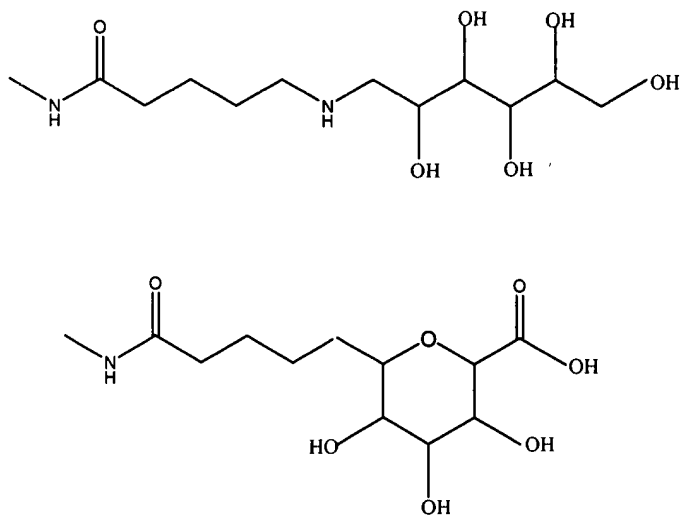
263. (New) A compound of claim 205 wherein at least one of  $R^{30}$ ,  $R^{31}$ , and  $R^{34}$  is phenyl substituted with a radical selected from the group consisting of:

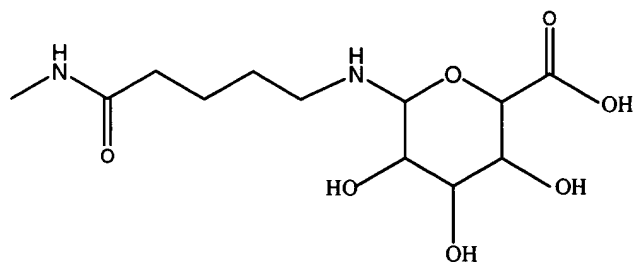
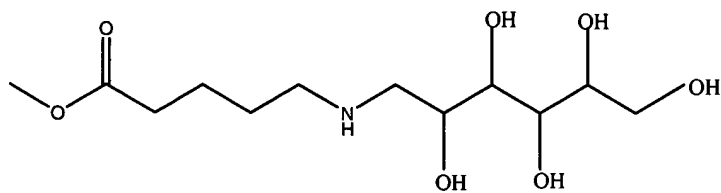
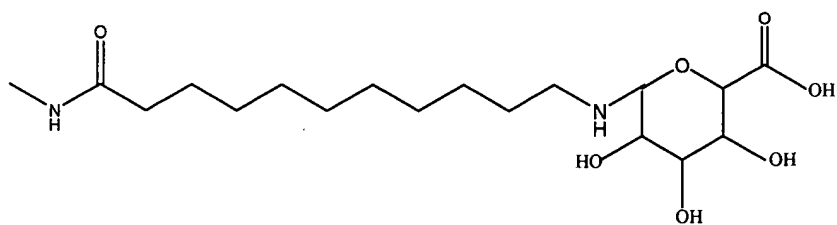
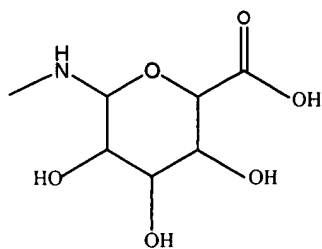


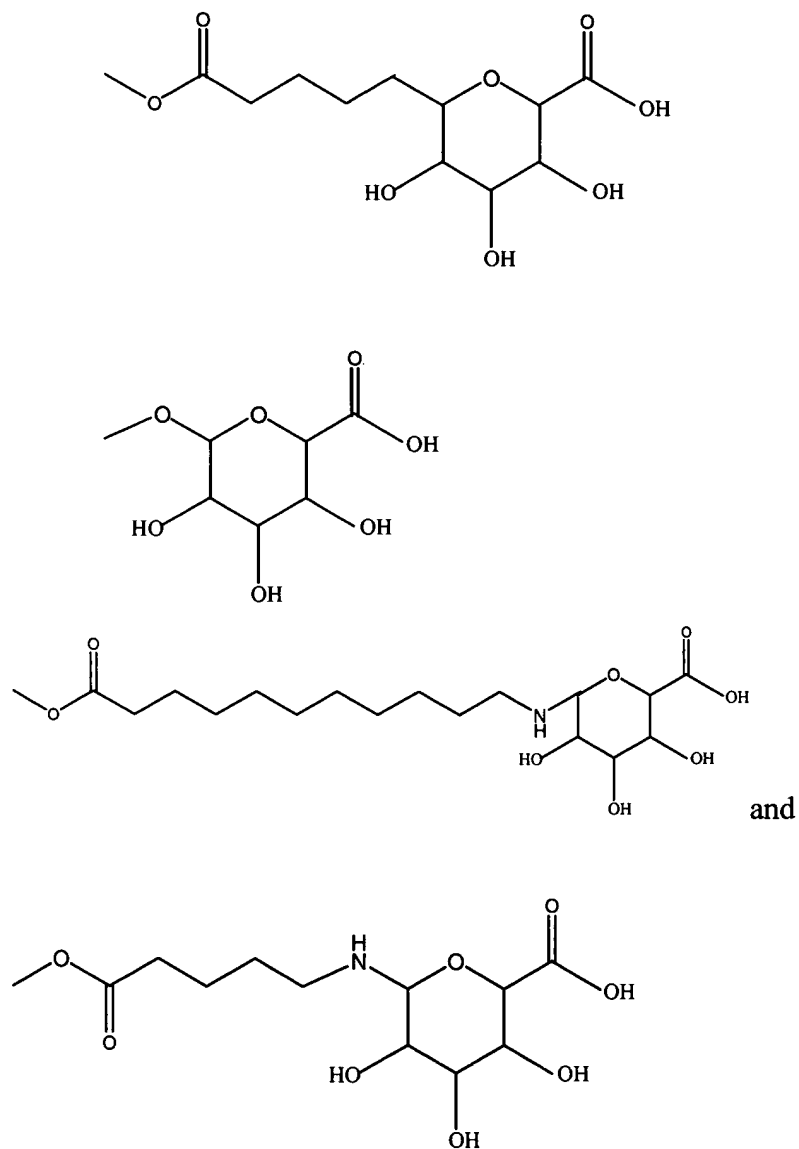




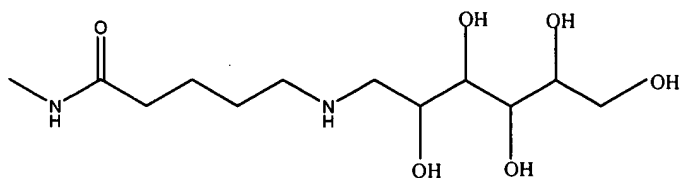
264. (New) A compound of claim 226 wherein at least one of  $R^{30}$ ,  $R^{31}$ , and  $R^{34}$  is phenyl substituted with a radical selected from the group consisting of:



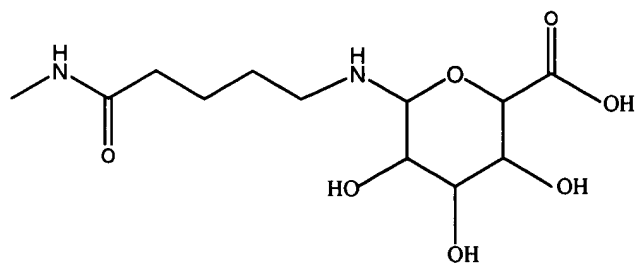
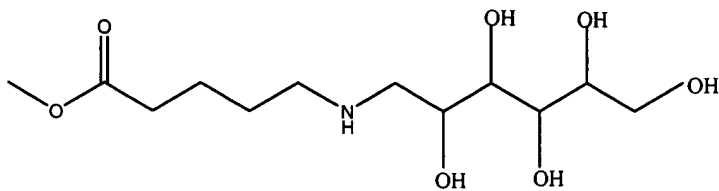
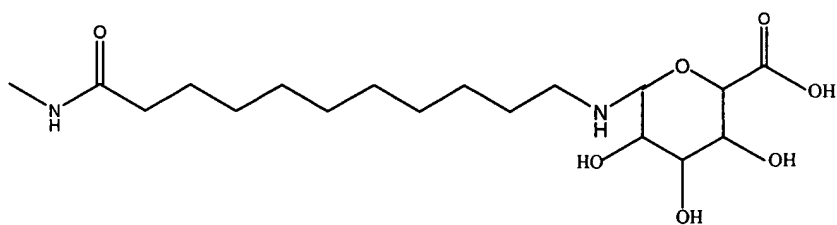
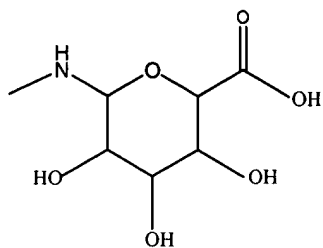
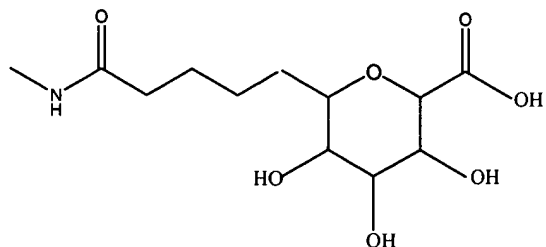


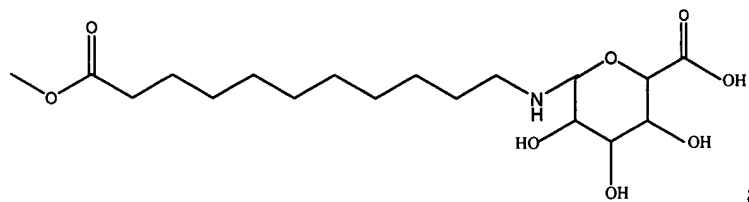
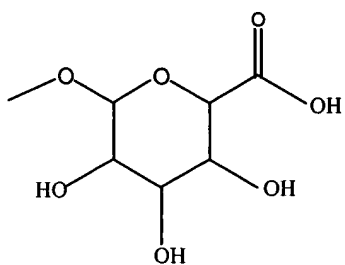
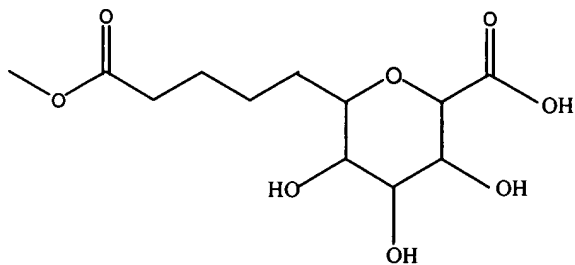


265. (New) A compound of claim 237 wherein at least one of  $R^{30}$ ,  $R^{31}$ , and  $R^{34}$  is phenyl substituted with a radical selected from the group consisting of:









and

